Social and Economic Assessment For the Wayne National Forest

Prepared By: Kenneth Arbogast
Public Affairs Officer
Huron-Manistee National Forest

Edited By Tomas M. Koontz, PhD.
Assistant Professor
School of Natural Resources
Ohio State University

January, 2004
Wayne National Forest

Contents

Introduction

Forest Planning and Social Assessment

Organization of the Assessment

Section 1: Background to the Social Landscape of the Wayne National Forest
- 1.1 Prehistory
- 1.2 Frontier and Statehood
- 1.3 Early African American History and the Underground Railroad Movement
- 1.4 Early Industry
- 1.5 Forest Conservation and the Federal Reserves
- 1.6 Establishment of a National Forest in Ohio
- 1.7 The Wayne National Forest Land and Resource Management Plan

Section 2: Socio-economic Landscape of Southeast Ohio
- 2.1 Population and Demographics
  - 2.1.1 Population Size
  - 2.1.2 Median Age of Population
  - 2.1.3 Ethnic/racial Background
  - 2.1.4 Education
  - 2.1.5 Income
- 2.2 Economy
  - 2.2.1 Trends in Number of Jobs, 1970-2000
  - 2.2.2 Unemployment Rates
  - 2.2.3 Diversification Across Economic Sectors
- 2.3 Impacts of Wayne National Forest Land Acquisition and Ownership
  - 2.3.1 Federal Funding Programs
  - 2.3.2 Payment Trends and Stakeholder Concerns
  - 2.3.3 Ownership Impacts on Development
  - 2.3.4 Ownership Impacts on Local Tax Bases
    - 2.3.4.1 Residential Development Tax Revenues and Service Costs
    - 2.3.4.2 Comparing Federal Payments to Property Taxes Paid by Residents
    - 2.3.4.3 Relative Impact of All Tax-exempt Properties on Counties within the Forest-wide Region
    - 2.3.4.4 Relative Impact of National Forest Ownership on School Funding
    - 2.3.4.5 Sales Tax Revenues Generated by the Wayne National Forest
    - 2.3.4.6 Opportunities for Local Governments to Increase Revenue
  - 2.3.5 Summary of Impacts of Wayne National Forest Land Acquisition and Ownership

Section 3: The Role of Natural Resource Industries in Local Economies
- 3.1 Timber and other Wood Products

3.1.1 Historical Development
3.1.2 Industry trends
3.1.3 National Forest Timber Harvest from an Ecological Perspective
3.2 Subsurface Resources
3.3 Recreation and Tourism
3.3.1 Nonlocal and Local Visitor Expenditures
3.3.2 Hunting
3.3.3 Boating, Fishing, Trail Riding, and Gathering Special Forest Products

Section 4: Recreational Opportunities on the Wayne National Forest
4.1 Popularity of Different Outdoor Recreation Activities in the State, Region, and Nation
4.2 National Forest Opportunities to Increase Recreational Opportunities
4.3 Outdoor Recreation and Area Economic Development

Section 5: Conclusion

Appendix: Ohio's School Funding Formula

Introduction

The Wayne National Forest is the only National Forest in Ohio. It contains more than 232,000 acres in 12 counties of Southeastern Ohio. The counties include: Athens, Gallia, Hocking, Jackson, Lawrence, Monroe, Morgan, Noble, Perry, Scioto, Vinton and Washington. The Forest has two ranger districts, the Athens Ranger District with offices in Athens and Marietta, and the Ironton Ranger District with an office in Pedro, Ohio.

The Wayne National Forest forms the core of the hill country of southeastern Ohio, the most heavily forested part of the state. Just 200 years ago, most Americans viewed this region of the Allegheny plateau as part of a vast wilderness. While today many people still view the Wayne as a remnant of the forest primeval, the impacts of industry and agricultural practices during the historic period have left substantial marks upon the land. Virtually all of the forest that covered Ohio when American settlers arrived was cut to make way for agriculture and to fuel both industry and farm homes. Mining for iron ore, limestone, coal and clay scarred hillsides and polluted many streams. As factories closed and farms failed in the 1930s, interest grew in adding lands in southeastern Ohio to the National Forest system. In 1934 the State of Ohio passed the Consent Act, enabling the Federal government to add certain lands in Ohio to the National Forest System. The following year, the Forest Service began to acquire and restore what were once dubbed “the lands that nobody wanted.”

Congress set the Forest Proclamation Boundary in 1951. The National Forest was administered through the Forest Supervisor’s Office of the Wayne-Hoosier National Forest, located in Bedford, Ind., until 1993. At that time, Congress authorized a separation of the joint forest and creation of a Forest Supervisor Office for the Wayne.

After nearly 70 years, the innate resilience of the hill country forest, enhanced by the work of the Forest Service and countless partners, has created a new forest that many people now value for its opportunities: to experience nature; to enjoy a variety of recreation; to explore the unique heritage of Southeast Ohio, once a major link in the Underground Railroad; and to employ the Forest’s resources for the region’s economic development.

Today, Ohio is dominated by rich farmland, industrial cities, sprawling suburbs and busy highways, and ranks 7th among states in population and 44th in percentage of lands owned by the federal government (1.7 % of the land area).[1] This scarcity of public lands creates intense competing demands for the Wayne's limited land base and resources. The challenge for those who choose to participate in the revision of the Forest Plan is to provide information and ideas that will help the Forest Service balance those competing demands in a way that will continue to provide for multiple uses of the Wayne National Forest. Given the significant impact that past agricultural and industrial practices have had upon the land, the Forest Plan management direction will continue to place special priority upon the restoration of the forest, the lands, the watersheds and the ecosystem.

The Wayne is managed for multiple uses such as recreation, timber, water quality, air quality, and wildlife. Minerals play an important role in the area, which has a long history of coal mining and oil and gas extraction. Former strip mining areas, some of which are currently being rehabilitated, are located throughout the National Forest.

Located in the foothills of the Appalachian Mountains, the Wayne also provides outstanding recreational opportunities. Leith Run on the Marietta Unit and Vesuvius Recreation Area on the Ironton District are favorite destinations for campers, hikers, horseback riders and fishermen. The 35-mile Little Muskingum River, in Washington County, takes canoeists through pastoral farmland scenes, under several covered bridges and past wooded hills. The Little Muskingum River is one of the few remaining free-flowing streams largely on public land within the state. Its well-preserved condition, and its location in the midst of one of the most heavily populated regions of the country, makes it a valuable opportunity for Midwest recreation enthusiasts.

Forest Planning and Social Assessment

The Wayne National Forest Land and Resource Management Plan (Forest Plan) was approved in 1988. There have been 13 amendments to the Plan subsequent to

[1] Population statistics are from the U.S. Census Bureau, www.census.gov/population/www.cen2000/phc-t2.html. Land ownership statistics are from General Services Administration, Federal Real Property Profile

signing. Since the Forest Plan was signed in 1988, the Wayne National Forest has also acquired an additional 54,000 acres. Implementation of the Plan over the last 15 years has resulted in thousands of management activities being planned and accomplished. During this time, the conditions of the Forest have changed due to management practices and natural events. To reflect these changing forest conditions as well as trends in societal demands and evolving scientific understanding of natural and human systems, Wayne National Forest professionals are working with communities to revise the forest's Land and Resource Management Plan. One element of such planning is the social and economic assessment.

The purpose of the assessment is to characterize the social and economic environment of the Wayne National Forest by showing the relationship and linkages between National Forest System land and communities.[2] This assessment will help the Forest Service and the public to (1) better understand the relationship between public lands and communities; (2) identify specific elements of the current forest plans that may need to be changed; and (3) assemble the information needed to evaluate trade-offs between options for future forest management. The information from this assessment will serve to highlight the forest's unique position and clarify the forest's role in and key contributions to the local community, the state, and the nation. The assessment aims to be broadly useful to the forest and the public, as a basis for well-informed consideration of future alternatives within and beyond the planning process.

The assessment is intentionally broad in scope and multi-faceted to provide a context for forest plan revision. It builds a contextually-rich foundation which not only reveals the parts, amounts, patterns and dynamics of the area in and around the Wayne National Forest but aids in understanding the history that created the current situation. Findings from the social and economic assessment will be used in concert with other resource information and assessments, the analysis of the management situation, need for change and the Notice of Intent. The social assessment will be further used in describing the affected environment, helping to set a reasonable range of alternatives and providing a baseline for effects analysis of the forest plan revision.

---

as of September 30, 2002, Washington DC: Table 16 (pp. 16-17),

[2] 36 CFR 219.1 (b)(14)

Organization of the Assessment

The following assessment is described in three primary sections. Following this introductory text, in the first section we provide the background to the social landscape of the Wayne National Forest. This section discusses pre-history, frontier and early industry, and the federal acquisition of lands that led to the creation of the Wayne National Forest. It also describes Forest planning. The second section focuses on the regional socio-economic conditions in the study area, Southeastern Ohio, including the 12 counties in which the Forest lies. We describe demographic and economic characteristics of the region, including the impacts of National Forest Land ownership on local governments. The third section assesses the role of Forest-specific resource industries, both commodity (timber, other wood products, and subsurface commodities such as coal, oil, and gas) and non-commodity (recreation).

Section 1: Background to the Social Landscape of the Wayne National Forest

1.1 Prehistory

Palaeo-Indians were the first humans to reach the area that is now Ohio, approximately 12,000 years ago. These nomadic peoples hunted large game such as the mastodon, elk, and caribou that migrated into Ohio after the glacier retreated northward. With continual warming, the Ohio territory became increasingly deciduous. Consequently, during the Archaic Period (ca. 8,000 - 1,000 B.C.) people were able to eat a broader variety of plant and animal species, supported by a more favorable environment. Late within this period, we see the beginnings of horticulture and burial rituals. The Woodland Period (ca. 1,000 B.C. - A.D. 1,200) is characterized by more stationary lifestyles that allowed the development of agriculture, the manufacture of ceramics, and elaborate burial practices. Burial of the dead in constructed earthen mounds was common in Early (Adena) and Middle (Hopewell) Woodland times. The Hopewell people established extensive trade networks across the country to obtain raw materials to fashion exotic items to bury with their dead. Grave goods were made out of copper from Lake Superior, mica from North Carolina and Tennessee, silver from Canada, obsidian from Wyoming, and marine shell from the Gulf of Mexico.

The Late Woodland people, probably the descendants of Middle Woodland groups, discontinued their ancestors' mound-building and extensive trading activities. However, the Late Woodland people appear to have been more successful at growing crops, and they lived in larger communities that the earlier groups. Finally, the late prehistoric Fort Ancient people (ca. 1,000 - A.D. 1,650) lived in large floodplain villages often organized around central plazas as well as in upland hunting camps. Mortuary practices were not as complex as those of the Hopewell, and they became more dependent on maize agriculture than on hunting and gathering.

Southeastern Ohio was apparently abandoned in very late prehistoric times. The people either emigrated to avoid conflicts with tribes farther east seeking control over fur

trade with Europeans on the East Coast, or they succumbed to diseases that originated in the European colonies and were passed from one Indian settlement to another.

Immediately prior to white contact, southeastern Ohio had no permanently settled native groups. Historic Native American tribes such as the Shawnee, Wyandotte, and Delaware lived and hunted extensively in southeastern Ohio in far-ranging nomadic groups instead of large villages. Their primary settlements appear to have been further west in the Scioto and Miami River valleys.

1.2 Frontier and Statehood

The first European explorers reached the Ohio territory around 1650. Documents including observations of their travels are the earliest written accounts of the area. Prior to the War for American Independence, the land in present-day Ohio was claimed by Great Britain. In the late 18th century, British colonial authorities prohibited settlement west and north of the Ohio River. However, frequent hunting and exploring expeditions on Indian land led to inevitable conflicts.

Following the War for American Independence, the land from the Appalachian Mountains to the Mississippi River was ceded to the new United States of America in treaty with England.[3] At that time, the states of Connecticut, New York, Pennsylvania and Virginia laid claim to the new territory; however, by 1786, all of those separate claims had been ceded to the central government functioning under the Articles of Confederation.[4] In return for ceding their larger, and conflicting, claims, Virginia and Connecticut retained rights to 4.2 million and 3 million acres, respectively. Congress intended to grant these lands to veterans of the American Revolution or survivors of those

[3] Beard, Charles and Mary Beard, The Rise of American Civilization: Macmillan, New York, 1930.
[4] Brown, Marshall S., Epoch-Making Papers in United States History: Macmillan, New York, 1922.

soldiers who died in the conflict. George Washington, himself a surveyor who had visited Ohio in 1754, received a warrant for 23,333 acres in Ohio, though he never claimed this land. To help veterans locate and settle their land without unnecessary disputes, Congress passed the Public Lands Act of 1785, which directed that the new territories would be surveyed on a grid, with tracts six miles square called townships.[5] Lands not claimed by Revolutionary War veterans would be sold to help the government repay the costs of fighting the war.

The earliest and heaviest settlement of Ohio in the eighteenth century occurred in the southeastern region not only because Marietta was the first settlement within the Northwest Territory, but because it is geographically close to Pennsylvania and Virginia, from which the majority of early settlers came.

In 1787, Congress passed "An Ordinance for the Government of the Territory of the United States Northwest of the River Ohio," more commonly referred to as the Northwest Ordinance of 1787. This historic legislation achieved several important results. First, it allowed for the sale of lands in the Northwest Territory to land companies and private citizens. Second, it administered the settlement of the new lands through territorial governments. Third, it laid out the method by which the new territories would eventually gain statehood. Fourth, Congress forbade slavery in the new territories or states, but allowed owners to reclaim escape slaves who had crossed the Ohio River, a momentous decision that would have significant repercussions for people of Southern Ohio. And fifth, Congress established what would become basic tenets for the relationship between the federal government and the states.

Soon after completing the Northwest Ordinance of 1787, Congress began selling large tracts of Ohio lands to land companies, which would survey and sell the individual parcels within the sections to settlers. The first of these was the purchase of 1.5 million acres along the Ohio River to the Ohio Company, headed by several officers of the Revolutionary War, including General Rufus Putnam.

The Treaty of Greenville (1795) defined the boundaries of Indian and white land in Ohio and encouraged new settlement in areas protected by the treaty. The treaty

[5] Dean, Tanya West and W. David Speas, Along the Ohio Trail: A Short History of Ohio Lands. 2002.

facilitated settlement far up the tributaries of the Ohio River and further opened up this area.

In 1800, Congress passed the Harrison Land Act, designed to further expedite the process of selling federal lands in the Northwest Territories. The Act, proposed by future President William Henry Harrison, established federal land offices that would identify available federal lands and accept bids from potential buyers, who were allowed to buy the property on credit. The first federal land office opened in Steubenville, Ohio, July 1800. The response was immediate. In 1803, the Ohio territory had grown in population to reach 60,000, the level required for statehood, and Ohio entered the Union as a state on March 1, 1803.

The earliest and heaviest settlement was in the southeastern part of the state, closest to Pennsylvania and Virginia – which provided most of the settlers. Early settlers were primarily of English, Welsh, Scottish, and Irish descent. Over the next 20 years, land offices sold more than 9 million acres of land in Ohio. In 1832, Congress lowered the minimum purchase of federal land from 320 acres to 40 acres. Federal land offices remained in operation in Ohio until 1866.

1.3 Early African American History and the Underground Railroad Movement

By the 1820's, several thousand African Americans had settled in Ohio. Early slave laws discouraged black settlement. In spite of the severe fines and penalties imposed by these laws, Ohioans were quite active in aiding fugitive slaves on their journey north to freedom in Canada on the Underground Railroad network. A number of small black communities sprang up in southeastern Ohio and quite often served as "stations" along this network of safe houses.

For African Americans enslaved in the South during the early 19th Century, the flight to freedom was long and dangerous. Runaway slaves could expect harsh treatment if they were caught, and a bounty was paid for their return. Those who escaped relied upon sympathetic strangers to give them food and shelter along their perilous trek. They followed a route that had no maps, directed from one safe haven to another along the

Underground Railroad. Escaping slaves not only traveled north, but also southward to places like Mexico, Puerto Rico, Cuba, the Bahaman Islands, and Jamaica.

By necessity, the routes of the Underground Railroad generally avoided cities, where more people meant a greater risk of being caught. The paths to freedom ran through many areas that are now managed by the Forest Service. In recognizing the importance of this early segment of African American history, the agency has started to identify, research, and preserve these resources. This work has the potential to tell an important part of the story of the quest for freedom.

The Wayne National Forest harbors the remains of two early African American rural settlements that were involved in the Underground Railroad movement – Pokepatch on the Ironton Ranger District, and Paynes Crossing on the Athens Ranger District.

Pokepatch was a significant station on the Underground Railroad and is well documented as such in Wilbur Siebert's *The Mysteries of Ohio's Underground Railroads*[6]. Pokepatch was settled in the 1820's by a racially diverse group of people including whites, free blacks, mulattos, and Native Americans. It consisted of various farmsteads dispersed in a rural setting, rather than a cluster of houses as in a "town." Most of the structures are now gone. The Union Baptist Church community was formed in 1819 and is still active, as is the adjacent cemetery. A school (Pine Hill) and several cemeteries are also reported in the Pokepatch area, but their locations have not yet been confirmed. According to some living family descendants, a brick C.H. & D. railroad tunnel (ca. 1840) in the southern portion of Pokepatch was often used by runaway slaves on their way to the safehouses in the northern portion. Recent research has shed more light on the Underground Railroad operation of Pokepatch. Through examination of archival records, it is now apparent that the early iron furnace industry in this region spearheaded by John Campbell of Ironton actually subsidized the Movement here. John Campbell was not only the founder of Ironton and leading iron furnace entrepreneur; he was a staunch abolitionist. Campbell grew up in Ripley, Ohio with the renowned abolitionist John Rankin, from whom, it is believed, he gained his anti-slavery views. Some of the conductors associated with Pokepatch include John J., James W., Jacob, and

[6] Siebert, Wilbur H., The Mysteries of Ohio's Underground Railroad: Long's College Book Co. Columbus, Ohio.

Isaac Stewart; Thomas and Peter Coker; John Chavis; Benjamin Holly; Caliph and Howell James; William Ellison; Henry Hutchinson; James Dicher; and Gabe Johnson. John Stewart (listed as “Black”) also managed nearby Gallia Iron Furnace, which was built by John Campbell. Some of the men who lived in Pokepatch enlisted in the U.S. Colored Troops and fought in the Civil War. After the Underground Railroad movement was over, most of the Pokepatch residents apparently moved out of the area, some to neighboring Blackfork.

Less is known about the historic black community of Payne's Crossing, but it is assumed that it was named after the Payne family. The configuration of the community closely resembles Pokepatch – dispersed farmsteads in a rural setting. The structures are now gone, and only the cemetery remains. Based on literary research, it has been determined that most of the people who lived here were freed from plantations in the Virginia territory in the early 1800's and came to settle first in Belmont County in eastern Ohio. There they became heavily involved in the Underground Railroad movement. Some of the families moved to the Payne's Crossing area by the 1830's. A working theory is that they moved here primarily to establish an Underground Railroad station, for there appears to be no clear economic reason for the settlement. They had money upon arrival, as they paid cash for the land. On the census they are categorized as "mulatto" and their occupations are listed as farmers, coopers, and coal miners. Five of the men enlisted in the U.S. Colored Troops, fought in the Civil War, and returned to live out their lives here. In addition to Payne, other family names are Harper, Lett, Norman, Mabray, James, Nye, Lehman, Robinson, Stevens, Dixon, Betts, Priest, Striblen, Nixon, Graison, Harden, Jones, Hance, Cooke, and Rice. The Payne Cemetery was restored by the Forest Service and many volunteer partners under the Passport In Time Program in 1994. It is now a frequently visited historic interpretive spot.

1.4 Early Industry

Southeastern Ohio was rich in natural resources, but its lands were difficult to farm due to its steep unglaciated topography and poor soils. The coal, iron, timber, salt,

clay, oil, and gas from the region was extracted and transported elsewhere for processing and use. Because very little of this economy-building resource processing occurred here, there was a negative effect on the area's development, wealth, and actual appearance. For example, large industrial centers comparable to Toledo, Cincinnati, and Cleveland did not emerge, and the area did not seemingly benefit from the wealth of its industry. However, Southeastern Ohio fueled industrialization and contributed significantly to Ohio's high ranking in industrial output and the development of the nation in the 19th and early 20th centuries.

By the 1930's Southeastern Ohio's Industrial Age was waning and its economy was declining. Population growth slowed and even declined in some places, and industrial technology began to change. Coal mining became mechanized, and iron production fell with the exhaustion of the forests as fuel and competitive markets in Minnesota. Many of the clay extraction industries were replaced by smaller facilities. The degraded state of many of Ohio's natural resources and associated pollution resulting from the industrial age generated increasing calls for conservation and restoration.

1.5 Forest Conservation and the Federal Reserves

Toward the end of the 19th century, a small but influential group of citizens led by Theodore Roosevelt (an avid hunter) became increasingly concerned about the damage being done to the environment. Within a 30-year period, Roosevelt had witnessed the disappearance of big game from the natural ranges in the East and the beginning of that process in the West. This group of wealthy sportsmen formed the Boone and Crockett Club and dedicated themselves to the practice of conservation not only for the sake of wildlife, but for the public lands and forest resources of the nation. Soon, an innovative forester named Gifford Pinchot joined the club. A Yale graduate and avid student of forestry, Pinchot championed the concept of conservation and founded the Society of American Foresters. Pinchot gave the Boone and Crockett Club new direction, with forestry as a major priority, and the group emerged as an influential element in the coalescence of the national Conservation Movement. Proponents of the Movement

focused more on forest conservation not only because of Pinchot's leadership but also because of a now recognized need. It became increasingly apparent to Americans that forests were endangered and forest landscapes were rapidly deteriorating.

When Gifford Pinchot became head of the Division of Forestry of the Department of Agriculture in 1898, a new era began for American forestry. One of his first goals was to gain control of the Forest Reserves, which were then under the direction of the Department of Interior. Pinchot and others criticized the Department of Interior's inadequacy in preventing trespass and fraud on the Reserves, and its failure to apply conservation principles. When Theodore Roosevelt became President in 1901, the work of forest conservation accelerated. Roosevelt personally understood the importance of conservation. Politically, he could see growing public support for it even though it aggravated some of the country's major corporate interests. As President, Roosevelt backed Pinchot in creating a new system of Forest Reserves, later called National Forests. Concurrently, Pinchot worked to reorganize, strengthen, and redirect the Division of Forestry from a technical advisory bureau to a diversified management organization capable of overseeing the vast new Forest Reserves. In 1901, the Division was renamed the Bureau of Forestry and in 1905 the Forest Reserves and its personnel were officially transferred to it. Then, on July 1, 1905, the Forest Service with Pinchot as its head Forester replaced the Bureau.

In 1911, the Weeks Act became law, authorizing Congress to appropriate money for "the protection of the watersheds of navigable streams, and to appoint a commission for the acquisition of lands for the purpose of conserving the navigability of navigable rivers" (16 U.S.C. 515 to 519, 521, 552, 563). In effect, this historic legislation was the authority for the creation of National Forests in the East because until this time National Forests were created out of existing federal land in the western United States.

The lead advocate for the Weeks Act was the second Chief of the Forest Service, Henry S. Graves, a native of Marietta, Ohio. Graves wrote: "It is my hope that we may secure sufficient public support to enable us to accelerate the acquisition by the Government of important remaining areas [in the East] before it is too late. Forests on critical watersheds should be owned by the public for their protective value. Public forests serve, also, as centers of cooperation with private owners and as demonstration

areas for the practice of forestry as well as furnishing their direct benefits in producing wood materials, as recreation grounds, etc."[7]

The Clarke-McNary Act of 1924 amended the Weeks Act and gave broad new powers to the Forest Service. Land purchase was no longer restricted to lands within the headwaters of major streams or which affected stream navigation. Now the agency could buy any land that was once in timber or that could be used to produce timber. With lesser restriction, the Forest Service now set out through the purchase unit procedure to create a comprehensive National Forest System in the East. Other provisions under the Act included direction to protect and reforest Forest Land, the establishment of a system of fire protection, official acceptance of donated land, and the creation of the National Forest Reservation Commission (NFRC), which would supervise the acquisition of Forest Lands by the government. Subsequently, the passage of the Woodruff-McNary Act greatly enhanced the land purchase process by providing a series of annual appropriations of up to $8 million to implement the Weeks Act.

1.6 Establishment of a National Forest in Ohio

The first document regarding consideration of the formation of a purchase unit in Ohio is a letter, dated November 8, 1919, addressed to the State Forester of Ohio from the Office of the Chief of the Forest Service. In the letter, the Chief's Office asked whether the State would support the purchase of land in Ohio for a National Forest. While noting that Ohio had established two small State Forests (Dean - 1,500 acres and Waterloo - 221 acres), the Forest Service stated that it would be understandable if Ohio would want to continue designation of Forests within the State system. If so, it might be more appropriate to leave this task for the State, given the relatively small area that would be available for consideration. Nonetheless, the Forest Service noted that there was a considerable area of "rough" land near the Ohio River that would fit the criteria set forth under the Weeks Act.

[7] Williams, Gerald W. The USDA Forest Service – The First Century. Washington, 2000.

After a series of correspondence between the State and Federal offices, the Forest Service conducted a reconnaissance of a proposed purchase unit in Ohio in 1923. The area was a 33,000-acre tract adjacent to the Ohio River in Scioto County approximately 15 miles southwest of Portsmouth. In the spring of 1924, the matter of a Federal Purchase Unit in Ohio was formally reviewed by the Board of the Ohio Agricultural Experiment Station (OAES). The Board's finding echoed the earlier Federal recommendation that, because Ohio has such a small amount of available "idle and waste lands", such lands should be designated State Forests and Parks. The Board also stated that Ohio was actively engaged in a policy of acquisition at that time.

No further consideration of a Federal Purchase Unit occurred until the early part of President Franklin Roosevelt's Administration. The decline in several Southeastern Ohio natural resource-based industries described above, combined with the Great Depression, caused many people to migrate out of the region. People were abandoning the land in record numbers, leaving much of it cutover, mined out, and eroding. Many farms offered at auction for non-payment of taxes had no buyers. By 1933, more than 30 percent of the land in southeastern Ohio was tax delinquent.

In January of 1933, federal legislation was proposed to relieve economic distress, create the Civilian Conservation Corps workforce, and increase the nation's forest resources. For the first time, Ohio showed a real eagerness to join the National Forest system. Legislation, introduced in 1934 as the State Consent Bill, called for allowing the Federal Government to acquire certain lands in Ohio as a means to ensure "immediate preservation of the public peace, safety, and health of the inhabitants of the State of Ohio" (O.R.C. Section 1503.32). It further stated that enactment was necessary because the Federal Government had appropriated funds that year to purchase "submarginal land" to establish National Forests and was ready to consider Ohio lands. The bill established a process for designating lands available for Federal purchase. The bill became law in December of 1934, called the Ohio State Consent Act (O.R.C. Section 1503.32).

In the fall of that year, S.D. Anderson of the Regional Office conducted field examination of five proposed purchase units in southern Ohio, totaling 1,464,000 acres, as follows: Muskingum Unit 282,000 acres, Hocking Valley Unit 355,000 acres,

McArthur Unit 285,000 acres, Little Scioto Unit 287,000 acres, and Symmes Creek Unit 255,000 acres.

According to the State Consent Act, the boundaries of the proposed Purchase Units must first be reviewed by the State. The Region's report on the five Units was submitted to the Ohio Chief's Office in January of 1935 with tentative approval from the OAES and the State of Ohio Land Use Planning Commission. The report was subsequently approved by the National Forest Reservation Commission (NFRC) on January 21, 1935. Final State approval of the Purchase Unit boundaries was granted by the OAES in February and by the Governor in April, 1935. The headquarters office for the Ohio Purchase Units was established in Columbus, Ohio early in 1935. The first designated Forest Supervisor was Byron Groesbeck. This marked the beginning of a Depression-era Purchase Unit program in Ohio.

Soon after they started, Federal land acquisition efforts in Ohio were stalled by a 1936 rule from the NFRC. The rule, spurred by a Federal funding shortage, barred approval for further acquisitions within the National Forest system unless 20 percent of a Purchase Unit was already under Federal control. This effectively blocked acquisition in Ohio, where less than 24,000 acres had been approved for purchase at the time. But criticism of the rule's impact on many states led to its withdrawal in 1939, thus allowing federal land acquisition to proceed in the Ohio Purchase Units.

A report establishing zones of priority acquisition (A, B, and C) within the Ohio Purchase Units was submitted to and approved by the NFRC in December of 1939. During the next two years minor adjustments were made to the boundaries of Zone A in both the Hocking Valley and Little Scioto Units, as approved by the NFRC in 1941. Weeks Act purchases again came to a halt temporarily during World War II, as Federal money was needed elsewhere.

A Forest Service nursery was established near Chillicothe (now administered by the Ohio Department of Natural Resources) to produce trees for reforestation. The Civilian Conservation Corps (CCC) provided jobs for the unemployed and the manpower to begin reforesting the hillsides and controlling erosion. These workers also constructed the fire lookout towers across Ohio and strung telephone lines between them to relay messages for wildfire control.

Toward the end of 1949, the Forest Service Chief's Office requested the Regional Office to consider not only a consolidation of the five Ohio Purchase Units into a single National Forest unit, but also a further consolidation with the Purchase Units in Indiana. This was proposed as an economic move that would reduce the accounting and administration of the two State systems. The consolidated units were known as the Wayne-Hoosier Purchase Units (Wayne of Ohio, and Hoosier of Indiana). The headquarters for the two Units was consolidated in the Hoosier's office in Bedford, Indiana. Then on September 4, 1951, the Acting Secretary of Agriculture issued an Administrative Order formally naming the Ohio Purchase Unit the Wayne National Forest, as approved by the NFRC. Although the Forest was named for General Anthony Wayne, a renowned Revolutionary War hero who helped open Ohio for white settlement, the actual basis for the designation or who originated the idea is unknown.

Over the next 20-year period, a major emphasis was on the acquisition of land to increase the size of the Forest within the five prescribed Purchase Units. Another major emphasis was restoration, including stabilizing erosion, rehabilitating damaged land, and controlling wildfires. In 1970, after several years of study, analysis, and legal processes, the legal boundary of the Wayne National Forest was adjusted and the number of Purchase Units was reduced from five to three – Athens, Marietta, and Ironton. This was a reduction from 1,411,969 acres to 830,836 acres. At that time, the Forest owned a total of 140,250 acres within the Units. The revision was made to include some watersheds more completely, and to exclude areas where a National Forest program was no longer possible due to residential, commercial, or industrial expansion. Administratively, the Wayne National Forest was managed together with the Hoosier National Forest, with headquarters in Bedford, Indiana.

In 1993 the Wayne National Forest was established as a separate administrative unit, with headquarters in Athens, Ohio. The 1993 Congressional Appropriations Bill directed the establishment of a Forest Supervisor's Office for the Wayne in Ohio and set aside $400,000 within the National Forest System's Budget to accomplish the task. Some of the reasons for this decision included the need for increased customer service to Ohio publics, the Forests by now had different resource issues and different Forest Plans,

and Wayne administrative officials would now be more accessible to its stakeholders, including in-state decision makers.

1.7 The Wayne National Forest Land and Resource Management Plan

The Resource Planning Act of 1974, as amended by the National Forest Management Act of 1976, directed the Forest Service to prepare a land and resource management plan (i.e. a forest plan) for each National Forest. The Acts require the agency to investigate management alternatives involving many combinations of activities and levels of production of goods, service, and uses. Under the guidelines set forth under the National Environmental Policy Act of 1969, the environmental impact of the proposed alternatives must be assessed. Together, these laws implement a nationwide assessment of forest resources every ten years.

The work of developing a Forest Plan is not a simple process and takes several years of serious and detailed analysis. In the Eastern Region of the Forest Service, the planning schedule called for all Forests to have their plans completed by December of 1985. However, many were not finished until several years thereafter due to the complexity of the task. Some factors that contributed to this complexity were the need to integrate clearcutting more meaningfully into forest management, the growing emphasis on multiple uses of National Forests, the wide variety of specialists with expertise which needed to be utilized, and most importantly public involvement in the entire process. The Wayne National Forest Plan took several years to complete, from 1985 to 1988, and it was the last one developed in the Region (approved on January 4, 1988).

National forest land management plans are dynamic and leave room for change as new information is learned and projects on the ground are implemented. The 1988 Wayne National Forest has been amended 13 times since it was signed. Those amendments include:

- Amendment 1 (12/90) corrected an error in language related to oil and gas development.
- Amendment 2 (12/90) eliminated Management Area 9.1 allocation.

- Amendment 3 (12/90) changed standards for stream crossings by oil and gas pipelines.
- Amendment 4 (12/90) increased width of vehicles on trails to 50".
- Amendment 5 (12/90) clarified use of high-clearance 4WD vehicles on public roads.
- Amendment 6 (12/90) clarified policy on retaining Little Muskingum River as a free-flowing stream.
- Amendment 7 (1/92) classified three potential special areas (MA 9.2) as special areas (MA 8.2).
- Amendment 8 (3/93) changed Forest Plan guidance for the management of special uses, minerals and geology to clarify resource protection needs associated with oil and gas development.
- Amendment 9 (3/93) classified Morgan Sister's Woods as a special area (M.A. 8.2).
- Amendment 10 (3/95) reclassified three potential special areas as special areas.
- Amendment 11 (2/98) added two tables to Forest Plan: 1) a table showing actual timber sale acreage for the first decade of the plan, 2) a table showing anticipated harvest for the next 5 years under the plan.
- Amendment 12 (5/99) designated Buffalo Beats as a Research Natural Area and revised management area designation for the RNA.
- Amendment 13 (5/03) addressed Threatened and Endangered Species, including the Indiana Bat and the American burying beetle.

On March 18, 1992, the Sierra Club and the Citizens' Council on Conservation and Environmental Control filed suit against the Forest Service regarding the approval of the Wayne National Forest Plan. Thus began a six-year landmark court battle that gained momentum and had serious implications for Forest Plan development within the agency nationwide. The primary basis for the complaint was an objection to the practice of clearcutting. The U.S. District Court ruled for the Government on March 11, 1994. The Sixth Circuit Court reversed this District Court decision in favor of the Sierra Club on January 21, 1997, and denied the Government's petition for a rehearing on April 7, 1997. The Sixth Court ruling further labeled the Wayne Forest Plan as "arbitrary and capricious". Then, on July 1, 1997, the Ohio Forestry Association intervened and petitioned for a review of the case before the U. S. Supreme Court.

On May 18, 1998, the Supreme Court unanimously ruled for the Government and dismissed the case. The Court held that the Sierra Club's claim that the Wayne Plan erroneously favored logging and clearcutting was not ripe for judicial review, and vacated the Sixth Court's decision that the Plan was unlawful. While the lawsuit was ultimately settled in favor of the Forest Service, during its six years of litigation the Forest was prohibited from implementing any timber sales.

Section 2: Socio-economic Landscape of Southeast Ohio

2.1 Population and Demographics

The state of Ohio ranks 7th nationally in population, with more than 11 million residents in 2000. The state's population at present is spread widely among metropolitan and non-metropolitan areas, with approximately 64 % living in urban areas, 17 % in suburban areas, and 19 % in "exurban" and rural areas statewide.[8] Ohio has six cities with populations larger than 150,000. Population density is highest in the northeastern, central, and southwestern portions of the state, anchored by the major metropolitan areas of Cleveland, Columbus, and Cincinnati, respectively. Although population density is lowest in southeastern Ohio, population growth statewide, and population shifts within the state to the Forest-wide region, combined with an aging population that is becoming more racially/ethnically diverse, will present important challenges and opportunities for the Wayne National Forest.

2.1.1 Population Size

Historically, both Ohio and the Forest-wide region (the 12 counties in which the Wayne National Forest lies) have increased in population through the decades, but Ohio's population has grown at a much faster rate than that in the region (see Table 1a). As a result, the portion of Ohio's total population living in the Forest-wide region has declined over the past century, from nearly 6 percent in 1930 to just under 4 percent in 2000. During this 70-year period, Ohio's total population grew by 71% percent while the Forest-wide region's population grew by just 22% percent.

However, in recent decades the region's population has been growing faster than the state. Between 1970 and 2000, the Forest-wide region's population has grown by 14.2 percent while the state's overall population has increased by just 6.6 percent (see

Table 1b). This trend illustrates the national "non-metropolitan turnaround" of the 1970s and the "rural rebound" phenomenon of the 1990s, in which certain rural areas gained population faster than did most metropolitan areas. The recent increasing rates of migration from urban to rural areas have been linked to growing numbers of retirees, and to the presence of recreational and esthetic amenities in particular rural places.[9]

In the future, the region's population is expected to be 488,180 in 2020, which is 8.5 percent higher than the region's 2000 population. The state's 2020 population is expected to be over 12 million, 9.2 percent higher than the state's 2000 population. Such population growth would likely lead to increased demands on forest and land resources.

[8] Irwin, Elena, and Jason Reece. 2002. "Urbanization and Sprawl in Ohio: Tracking Ohio's Urban Growth and Land Use Change." The Exurban Change Project, College of Food, Agricultural, and Environmental Sciences, The Ohio State University, Columbus, Ohio, Report EX-4.
[9] Johnson, Kenneth M., and Calvin L. Beale. 1998. "The Rural Rebound: Recent Nonmetropolitan Demographic Trends in the United States." *The Wilson Quarterly*, Spring. http://www.luc.edu/depts/sociology/johnson/p99webn.html, accessed 9/29/03.

Table 1a – Total Population Trend 1930-2020 for Wayne National Forest Counties

	Historical										*Projected*	
Location	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**Net change (1930-2000)**	**% Change (1930-2000)**	**2010**	**2020**
Athens	44,175	46,166	45,839	46,998	54,889	56,399	59,549	62,223	18,048	41%	66,810	71,950
Gallia	23,050	24,930	24,910	26,120	25,239	30,098	30,954	31,069	8,019	35%	31,230	31,670
Hocking	20,407	21,504	19,520	20,168	20,322	24,304	25,533	28,241	7,834	38%	31,440	34,920
Jackson	25,040	27,004	27,767	29,372	27,174	30,592	30,230	32,641	7,601	30%	35,030	37,680
Lawrence	44,541	46,705	49,115	55,438	56,868	63,849	61,834	62,319	17,778	40%	62,700	63,700
Monroe	18,426	18,641	15,362	15,268	15,739	17,382	15,497	15,180	(3,246)	-18%	14,920	14,800
Morgan	13,583	14,227	12,836	12,747	12,375	14,241	14,191	14,897	1,314	10%	15,590	16,420
Noble	14,961	14,587	11,750	10,982	10,428	11,310	11,336	14,058	(903)	-6%	15,390	16,800
Perry	31,445	31,087	28,999	27,864	27,434	31,032	31,557	34,078	2,633	8%	36,730	39,720
Scioto	81,221	86,565	82,910	84,216	76,951	84,545	80,327	79,195	(2,026)	-2%	79,980	81,340
Vinton	10,287	11,573	10,759	10,274	9,420	11,584	11,098	12,806	2,519	24%	14,100	15,510
Washington	42,437	43,537	44,407	51,689	57,160	64,266	62,254	63,251	20,814	49%	63,170	63,670
Forest-wide region	369,573	386,526	374,174	391,136	393,999	439,602	434,360	449,958	80,385	22%	467,090	488,180
State	6,646,697	6,907,612	7,946,627	9,706,397	10,652,017	10,797,603	10,847,115	11,353,140	4,706,443	71%	11,828,270	12,402,140
Region population as a proportion of state pop.	5.56%	5.6%	4.71%	4.03%	3.70%	4.07%	4.00%	3.96%			3.95%	3.94%

Sources: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025.. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300. The U.S. Census Bureau: http://www.census.gov/index.html. Website accessed on 9/3/2003

Table 1b - Net and Percentage Population Change from 1970-2000 and from 2000-2020

	Historical				*Projected*					
Location	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Net Change (1970-2000)**	**% Change (1970-2000)**	**Net change (2000-2020)**	**% Change (2000-2020)**
Athens	54,889	56,399	59,549	62,223	66,810	71,950	7,334	13.4%	9,727	15.6%
Gallia	25,239	30,098	30,954	31,069	31,230	31,670	5,830	23.1%	601	1.9%
Hocking	20,322	24,304	25,533	28,241	31,440	34,920	7,919	39.0%	6,679	23.7%
Jackson	27,174	30,592	30,230	32,641	35,030	37,680	5,467	20.1%	5,039	15.4%
Lawrence	56,868	63,849	61,834	62,319	62,700	63,700	5,451	9.6%	1,381	2.2%
Monroe	15,739	17,382	15,497	15,180	14,920	14,800	(559)	-3.6%	(380)	-2.5%
Morgan	12,375	14,241	14,191	14,897	15,590	16,420	2,522	20.4%	1,523	10.2%
Noble	10,428	11,310	11,336	14,058	15,390	16,800	3,630	34.8%	2,742	19.5%
Perry	27,434	31,032	31,557	34,078	36,730	39,720	6,644	24.2%	5,642	16.6%
Scioto	76,951	84,545	80,327	79,195	79,980	81,340	2,244	2.9%	2,145	2.7%
Vinton	9,420	11,584	11,098	12,806	14,100	15,510	3,386	36.0%	2,704	21.1%
Washington	57,160	64,266	62,254	63,251	63,170	63,670	6,091	10.7%	419	0.7%
Forest-wide region	393,999	439,602	434,360	449,958	467,090	488,180	55,959	14.2%	38,222	8.5%
State	10,652,017	10,797,603	10,847,115	11,353,140	11,828,270	12,402,140	701,123	6.6%	1,049,000	9.2%

Sources: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025.. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300. The U.S. Census Bureau: http://www.census.gov/index.html. Website accessed on 9/3/2003

In the year 2000, Scioto County had the largest population, 79,195 of the 12 counties in the Forest-wide region (see Table 1a). Washington County has had the region's highest percent change in population through the years 1930-2000, growing 49 percent. On the other hand, Vinton County had the region's smallest 2000 population, 12,806. Monroe County's population showed the largest decline in the region from 1930 to 2000, decreasing by 18 percent.

In the more recent years, from 1970 to 2000, Hocking County has grown the fastest in the region, with population increasing by 39 percent. At the other end of the scale, Monroe County's population declined by 3.6 percent during this same period.

According to population projections, the fastest-growing county in the region over the next two decades is again expected to be Hocking, with a projected growth rate of 23.7 percent from 2000 to 2020. In total, the population in the Forest-wide region is expected to increase by 8.5 percent, with 11 counties gaining and one county losing population (see Table 1b).

2.1.2 Median Age of Population

A population's age structure is an important component of the socio-economic landscape. Longer average life spans and declining birth rates are evident in changes in the median age of population, which has increased in Ohio from nearly 28 years in 1970 to over 36 years in 2000 (see Table 2). Statewide, the median age is projected to increase to just over 38 years by 2020.

The Forest-wide region at present has a slightly older population than does the state. In 1970 the region had a median age of just over 29 years, and in 2000 the median age in the region had increased to over 36 years. The median age in the region is projected to approach 40 years by 2020.

Within the 12-county Forest region, there are differences in median age. In 2000, the highest county median age was nearly 41 years, in Monroe County, while the lowest was under 26 years, in Athens County (which is home to Ohio University). This range is expected to decrease in the future, with a projected median age over 44 years in Monroe County, and just over 36 years in Perry County, by the year 2020. Median age is

projected to increase in each of these 12 counties from 2000 to 2020, representing an increasingly older population neighboring the Wayne National Forest.

Table 2 – Median Age of Population

	Historical				*Projected*	
Location	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Athens	21.81	24.54	25.46	25.66	31.72	38.58
Gallia	30.23	30.05	33.55	37.37	38.97	39.76
Hocking	29.10	30.60	34.42	37.73	40.12	41.07
Jackson	30.46	30.40	33.98	36.31	38.06	38.54
Lawrence	28.67	30.43	34.29	37.61	39.55	39.84
Monroe	29.47	30.85	36.63	40.76	43.90	44.47
Morgan	31.24	31.09	34.13	38.89	41.36	40.93
Noble	31.25	30.27	33.81	35.44	37.89	39.64
Perry	28.36	28.68	32.59	35.05	36.32	36.35
Scioto	30.92	30.90	34.34	36.71	38.10	39.31
Vinton	28.96	29.20	33.61	35.55	36.45	36.38
Washington	27.91	29.92	34.74	39.11	41.76	42.27
Forest-wide average	29.03	29.74	35.71	36.35	38.68	39.76
State	27.61	29.95	33.45	36.22	37.73	38.01

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

2.1.3 Ethnic/racial Background

The ethnic/racial background of the U.S. population is becoming increasingly diverse. In fact, it has been estimated by the U.S. Census Bureau that by the year 2050, Whites will no longer comprise a majority of the U.S. population.[10] In Ohio, just under 15 percent of the population was identified as ethnic/racial minority in 2000, but the percentage is expected to increase. Minority populations tend to have different use patterns for public lands, and management priorities, than do Whites[11]. Thus understanding ethnic/racial characteristics of the population will likely be a critical component of effective public lands management.

In the year 2000, the majority of the population was identified as White (non-Hispanic) in Ohio and in the Forest-wide region (See Table 2). The population of the region had lower ethnic/racial diversity than did the state as a whole, with nearly 97 percent Whites in the region, compared to 85 percent Whites in the state as a whole. The greatest proportion of individuals with minority ethnic/racial background were identified as African-American (11.5 percent statewide, 1.9 percent in the region), followed by Hispanic (1.9 percent statewide, 0.5 percent in the region), and Asian-American (1.2 percent statewide, 0.2 percent in the region).

In the future, ethnic/racial diversity is expected to increase both statewide and in the region. Between 2000 and 2020, the portion of the population comprised of African-Americans is projected to increase from 11.5 percent to 12.8 percent of the state's population, and from 1.9 percent to 2.1 percent of the region's population. During the same time period, the portion of the population comprised of Hispanics is projected to increase from 1.9 percent to 3.4 percent of the state's population, and from 0.5 percent to

[10] US Census Bureau. (2000, January 13). *Projections of the Resident population by race, Hispanic origin, and nativity.* Retrieved January 8, 2003 from http://www.census.gov/poplation/projections/nation/summary/np-t5-b.txt.

[11] Carr, D.S. & Williams, D. R. (1993). Understanding the role of ethnicity in outdoor recreation experiences. *Journal of Leisure Research, 25,* 22-38.; Johnson, C.Y. (1998). A consideration of collective memory in African-American attachments wildland recreation places, *Human Ecology, 5,* 5-15, Taylor, D.E (1989). Blacks and the environment: Toward an explanation of the concern and action gap between blacks and whites. *Environment and Behavior,* 21, 175-205.

1.1 percent of the region's population. In addition, the portion of the population comprised of Asian-Americans is projected to increase from 1.2 percent to 2.1 percent of the state's population, and from 0.2 percent to 0.9 percent of the region's population.

Within the region, in 2000, Noble County had the highest percentage of minority population (7.45 percent) among the 12 Forest-wide counties. In contrast, Monroe County was least ethnic/racially diverse (0.86 percent non-White). The population projections from the year 2000 to the year 2020 predict that Noble County will have the highest percentage of minority population (10.71 percent), while Perry County will have the lowest percentage of minority population (1.38 percent). Noble County is expected to see the largest shift in minority percentage, from 7.45 percent in 2000 to 10.71 percent in 2020.

Table 3 – Percentage of White and Minority Populations

	Historical				*Projected*							
	2000				**2010**				**2020**			
Location	**White Population**	**% White**	**Minority Population**	**% Minority**	**White Population**	**% White**	**Minority Population**	**% Minority**	**White Population**	**% White**	**Minority Population**	**% Minority**
Athens	58,750	94.42%	3,460	5.56%	62,200	93.10%	4,610	6.9%	66,300	92.15%	5,660	7.87%
Gallia	29,790	95.91%	1,260	4.06%	29,830	95.52%	1,390	4.45%	30,150	95.20%	1,520	4.80%
Hocking	27,780	98.27%	480	1.70%	30,910	98.31%	520	1.65%	34,290	98.20%	620	1.78%
Jackson	32,090	98.35%	540	1.65%	34,380	98.14%	650	1.86%	36,940	98.04%	750	1.99%
Lawrence	60,420	97.00%	1,880	3.02%	60,580	96.62%	2,120	3.38%	61,240	96.14%	2,450	3.85%
Monroe	15,040	99.19%	130	0.86%	14,750	98.86%	170	1.14%	14,590	98.58%	210	1.42%
Morgan	14,260	95.77%	620	4.16%	14,820	95.06%	770	4.94%	15,500	94.40%	900	5.48%
Noble	13,040	92.55%	1,050	7.45%	14,040	91.23%	1,360	8.84%	15,000	89.29%	1,800	10.71%
Perry	33,740	98.97%	340	1.0%	36,290	98.80%	440	1.20%	39,170	98.62%	550	1.38%
Scioto	75,860	95.83%	3,300	4.17%	76,170	95.24%	3,340	4.18%	77,020	94.69%	4320	5.31%
Vinton	12,630	98.67%	170	1.33%	13,880	98.44%	220	1.56%	15,260	98.39%	240	1.55%
Washington	61,870	97.86%	1,350	2.14%	61,550	97.44%	1,620	2.56%	61,760	97.00%	1,910	3.00%
Forest-wide total	435,270	96.76%	14,580	3.24%	449,400	96.31%	17,210	3.69%	467,220	95.71%	20,930	4.29%
State	9,672,860	85.15%	1,687,090	14.85%	9,844,830	83.23%	1,983,440	16.77%	10,101,590	81.45%	2,300,540	18.55%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

2.1.4 Education

High school graduation rates indicate a commitment to career preparation and community values, but they do not ensure educational quality or high performance standards. The willingness, commitment, and resourcefulness of students to prepare for adult careers are important for successful professions and sustainable communities when ample employment opportunities are available. The general high school student population in Wayne National Forest planning area shows that such willingness and resourcefulness exist to a large degree. Although only four of the twelve counties' high school graduation rates were above the state average of 86%, only two were substantially lower: Morgan at 71.6% and Vinton at 75.1% (See Table 4). The rest were comparable to the state average, ranging from 81.3% to 85.65% for a majority of the counties. It is noteworthy that all of the counties around the Marietta Unit had graduation rates above the state average.

Table 4 - High School Graduation Rates in Forest-wide Region and State, 2000

County	High School Graduation Rate
Athens	81.3%
Gallia	83.7%
Hocking	82.2%
Jackson	85.6%
Lawrence	83.5%
Monroe	90.6%
Morgan	71.6%
Noble	91.3%
Perry	89.0%
Scioto	84.0%
Vinton	75.1%
Washington	89.0%
State average	86.0%

2.1.5 Income

While income levels have increased steadily over the years, people living in WNF planning area counties have usually had substantially lower income levels than the state average. In 1970, the mean household income for the region was $32,276 whereas the mean household income statewide was $46,163 (See Table 5a). Today, the discrepancy between region and statewide income levels has not changed. In 2000, the average household income for the 12-county region was $45,247, while the average household income for the entire state was $65,526 (See Table 5a). Similarly, in 2000, income per capita averaged $17,860 for counties in the forest-wide region and $26,250 statewide (See Table 5b).

In the region, Washington County had the highest per capita and mean household income ($21,495 and $52,801 respectively) in the year 2000. In fact, since 1970, Washington County has consistently maintained the highest income levels in the region. On the other hand, the county with the lowest income levels in the region has changed over time. In 1970, Vinton County had the lowest mean household and per capita income ($26,039 and $8,202 respectively). However, in 2000, Noble County had the lowest average household income of $37,989 and per capita income of $14,058.

In the future, income levels are expected to increase both at the region and state levels. However, projections out to 2020 show that the 12 counties in the forest-wide region will continue to have substantially lower income levels than the state average. By 2020, Gallia County is expected to have the highest mean household ($68,419) and per capita ($27,564) income levels. Conversely, Noble County is predicted to continue to have the lowest income levels in the region (mean household income: $45,766 and income per capita: $17,294).

Table 5a – Mean Household Income (1996 $)

	Historical				*Projected*	
Location	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Athens	$28,295	$33,779	$37,290	$43,200	$47,780	$52,920
Gallia	$29,968	$40,549	$40,726	$50,782	$58,506	$68,419
Hocking	$33,241	$38,000	$42,661	$49,317	$52,660	$57,222
Jackson	$29,959	$34,813	$39,287	$46,620	$52,965	$59,154
Lawrence	$31,699	$39,600	$40,185	$43,949	$47,872	$53,333
Monroe	$36,197	$45,243	$41,047	$44,972	$48,973	$54,941
Morgan	$35,987	$42,032	$45,125	$42,430	$45,722	$50,287
Noble	$29,710	$38,773	$38,074	$37,989	$41,503	$45,766
Perry	$32,179	$39,252	$40,434	$43,681	$48,207	$53,946
Scioto	$35,390	$37,610	$38,902	$46,296	$52,309	$60,426
Vinton	$26,039	$34,711	$37,643	$40,930	$44,124	$48,162
Washington	$38,643	$44,314	$45,706	$52,801	$58,287	$65,787
Forest-wide average	$32,276	$39,056	$40,590	$45,247	$49,909	$55,864
State	$46,163	$50,553	$57,028	$65,526	$73,283	$82,648

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

Table 5b – Income Per Capita (1996 $)

	Historical				*Projected*	
Location	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Athens	$9,401	$12,396	$14,307	$17,518	$19,831	$21,928
Gallia	$9,682	$14,332	$15,398	$20,239	$23,728	$27,564
Hocking	$10,819	$13,556	$15,935	$19,384	$21,142	$22,864
Jackson	$9,675	$12,312	$14,812	$18,273	$21,234	$23,672
Lawrence	$9,943	$13,805	$15,036	$17,620	$19,716	$21,997
Monroe	$11,351	$15,696	$15,416	$17,998	$20,035	$22,415
Morgan	$11,708	$14,768	$16,733	$17,001	$18,739	$20,548
Noble	$9,541	$13,734	$14,085	$14,058	$15,703	$17,294
Perry	$10,091	$13,387	$14,567	$16,168	$18,150	$20,121
Scioto	$11,646	$13,513	$14,948	$18,718	$21,592	$24,847
Vinton	$8,202	$12,015	$13,965	$15,849	$17,507	$19,106
Washington	$12,256	$15,754	$17,755	$21,495	$24,081	$26,911
Forest-wide average	$10,360	$13,772	$15,246	$17,860	$20,122	$22,439
State	$14,640	$18,294	$21,945	$26,250	$29,962	$33,634

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

2.2 Economy

The current economic health and vitality of the rural counties in the Wayne National Forest planning area continues to lag behind both national and state measures of significant indicators. These counties make up one of the most impoverished areas in Ohio. They remain a part of the Appalachian Regional Commission, a national program created in 1965 and consisting of multiple state counties targeted for economic development to reverse the damaging trends of chronically higher unemployment, net outward migration, and acute lower levels of income. Thus the area is a target region in Ohio for community and economic development by both state and federal government programs.

Important components in assessing the region's economy include number of jobs, unemployment levels, and diversification across economic sectors. The 12 counties in the Forest-wide region comprise only a small portion of the state's jobs, but these jobs provide critical employment opportunities in the region. The region has experienced unemployment rates higher than the state average. At a broad scale, the region is more economically diversified than the state, and the trade/services sector comprises the lion's share of jobs in the region, with the natural resources sector comprising a relatively small portion.

2.2.1 Trends in Number of Jobs, 1970-2000

Over the past three decades, the numbers of jobs available statewide and in the Forest-wide region have increased substantially. As shown in Table 6, the total number of full-time and part-time jobs increased by 47 percent statewide and by 38 percent in the region. The share of all statewide jobs represented by jobs in the region declined slightly from 2.9 percent in 1970 to 2.7 percent in 2000.

Table 6 – Full-time and Part-time Employment Trend 1970-2000 for WNF Counties

Location	1970	1980	1990	2000	Net Change (1970-2000)	% Change (1970-2000)
Athens	18,875	21,012	24,527	27,887	9,012	48%
Gallia	9,083	12,801	13,674	16,784	7,701	85%
Hocking	6,983	8,091	8,703	9,747	2,764	40%
Jackson	9,162	10,080	11,492	14,844	5,682	62%
Lawrence	14,005	15,340	15,836	18,540	4,535	32%
Monroe	7,802	10,005	7,334	7,424	(378)	-5%
Morgan	4,744	5,452	6,263	5,928	1,184	25%
Noble	3,110	3,620	3,959	5,102	1,992	64%
Perry	7,311	8,074	9,848	10,267	2,956	40%
Scioto	26,852	27,084	27,719	32,796	5,944	22%
Vinton	2,461	3,540	3,643	3,408	947	39%
Washington	23,763	27,011	29,869	33,003	9,240	39%
Forest-wide total	134,151	152,110	162,867	185,730	51,579	38%
State	4,682,839	5,215,316	5,910,736	6,877,576	2,194,737	47%

Source: U.S. Department of Commerce. REIS: Regional Economic Information System 1969-2000. CD-ROM. May 2002

Within the Forest-wide region, Scioto County had the highest number of jobs from 1970 to 1980 (See Table 6). But by 1990, Washington County had become the leader in this statistic, continuing to have the highest number of jobs (33,003) in 2000. This trend gave Washington County the highest net change from the year 1970 to 2000, with an increase of 9,240 jobs (a 39 percent increase). The only county in the region with a decline in the number of jobs, from 1970 to 2000, was Monroe County (378 fewer jobs, or -5 percent). In terms of largest percent change in number of jobs, Gallia County had the highest growth, increasing full and part-time jobs by 85 percent (7,701 jobs) from 1970 to 2000. In contrast, Vinton County has had the least number of full and part-time jobs in the region, throughout the past three decades. In 2000, Vinton County had 3,408 jobs.

2.2.2 Unemployment Rates

While the number of jobs in a county indicates the size of the local economy, unemployment figures provide additional information about the job opportunities available to the local workforce. As of July 2002, unemployment rates in 10 of the 12 Forest-wide counties exceeded the statewide average (see Table 7). County unemployment rates in the region ranged from a low of 4.9 percent in Athens to a high of 13.3 percent in Morgan.

Table 7 – Unemployment Rates in the Forest-Wide Region and State (July 2002)

County	Unemployment Rate
Athens	4.9%
Gallia	6.8%
Hocking	7.2%
Jackson	8.4%
Lawrence	6.8%
Monroe	6.6%
Morgan	13.3%
Noble	6.8%
Perry	11.5%
Scioto	7.8%
Vinton	12.4%
Washington	5.3%
State average	5.8%

Source: Ohio Department of Development, Office of Strategic Research, Ohio County Profiles, http://www.odod.state.oh.us/research/Files/s0.html.

2.2.3 Diversification Across Economic Sectors

Economic sector diversity indicates how employment is distributed across different sectors of the economy. An area with high sector diversity features employment in many different sectors. Greater diversity can make a community more resilient in the face of change, since decline within one sector may be offset by employment in other sectors. Economic analysts have divided the economy into four general economic sectors, each comprised of a number of related industries. These sectors are as follows:

Government

Farming, Agricultural Services, and Mining

Construction, Manufacturing, and Transportation

Wholesale and Retail Trade, Finance/Insurance/Real Estate (FIRE), and Services

Table 8 – Jobs and Earnings (1996 $) by Economic Sector (2000)

	Farming, Agricultural Services, and Mining		Construction, Manufacturing, And Transportation		Government		Wholesale and Retail Trade, Finance/ Insurance/Real Estate, and Services	
Location	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**
Athens	940	$3.87	2,980	$69.58	10,360	$360.86	13,460	$227.63
Gallia	1,170	$2.84	3,540	$129.42	2,120	$71.80	9,540	$185.13
Hocking	670	$5.51	3,330	$100.48	1,740	$57.68	4,550	$64.53
Jackson	1,220	$31.90	5,600	$162.76	1,570	$50.14	6,870	$108.13
Lawrence	790	$3.43	4,070	$129.04	3,980	$115.49	10,380	$144.58
Monroe	1,390	$20.38	3,000	$117.32	1,000	$27.07	2,090	$24.32
Morgan	1,030	$21.68	1,750	$65.76	780	$21.92	2,110	$26.18
Noble	820	$7.20	1,090	$36.73	1,150	$31.65	2,250	$29.98
Perry	1,350	$13.87	3,120	$94.08	1,840	$48.22	4,710	$71.38
Scioto	1,120	$5.99	6,290	$211.96	5,860	$199.41	19,940	$361.44
Vinton	300	$3.58	1,050	$29.10	860	$21.91	1,360	$20.01
Washington	2,420	$17.80	9,620	$358.44	3,580	$115.05	18,130	$346.10
Forest-wide	13,220	$138.05	45,440	$1,504.67	34,840	$1,121.20	95,390	$1,609.41
Sector as a % of all sectors forest-wide	7%	3%	24%	34%	18%	26%	51%	37%
State	183,730	$2,762	1,798,410	$76,671.01	808,310	$30,781.12	4,090,450	$102,308.08
Sector as a % of all sectors statewide	3%	1%	26%	36%	12%	15%	59%	48%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

In 2000, the Wholesale Trade, Retail Trade, FIRE, and Services sector represented the largest share of the economy in the Forest-wide Region, generating $1,609,410,000 in wages and accounting for 95,390 jobs (See Table 8). This sector comprised 37% of wages and 51% of jobs across all sectors in the region. The second-largest sector was the Construction, Manufacturing, and Transportation sector, which generated $1,504,670,000 in wages and accounted for 45,440 jobs. This sector comprised 34% of wages and 24% of jobs across all sectors in the region.

Comparing the region to the state as a whole, it is evident that the region is more dependent on the Farming, Agricultural Services, Mining sector as well as the Government sector. In the region, the Farming, Agriculture Services, and Mining sector comprises 7% of jobs and 3% of wages, compared to just 3% of jobs and 1% of wages statewide. Additionally, the Government Sector generates 18% of jobs and 26% of wages in the region, compared to just 12% of jobs and 15% of wages statewide. In contrast, the region is less dependent on the Wholesale Trade, Retail Trade, FIRE, and Services sector, with 51% of jobs and 37 % of wages in the region, compared to 59% of jobs and 48% of wages statewide.

The variability among counties in the WNF region is made apparent when jobs and wages across all economic sectors are totaled for each county (See Table 9). In 2000, Washington County had the greatest number of jobs (33,740) and generated the most in total wages ($837,380,000). Scioto County was not far behind Washington County with 33,220 jobs and $778,810,000 in wages. Conversely, Vinton County had the fewest number of jobs (3,570) and generated the least in wages ($74,600,000) in 2000.

Economic diversity indices were also calculated for both the state and the counties in the Wayne National Forest region using the Shannon-Weaver diversity index. The Shannon-Weaver index is based upon the spread of jobs throughout each economic sector and ranges from 0 (no economic diversity) to 1.0 (perfect economic diversity, with an equal number of jobs in each sector). These calculations indicate that, while both the state and the forest-wide region have somewhat diverse economies, the region's economy (0.86) was more diversified than the state (0.62) as a whole in 2000 (See Table 9).

Within the Forest-wide region, there was substantial variability among the 12 counties in 2000. At 0.74, Washington County had the lowest economic diversity in the region, whereas Morgan County had the highest economic diversity (0.95). Regardless of the variability, all 12 counties displayed high economic diversity when compared to the state.

It should be noted that these calculations reflect greater diversity in the Forest region, compared to the state, when jobs are aggregated into the four broad sectors listed above. If job diversity were to be calculated across more narrow industry groupings, with more than four categories, the results might differ substantially. Here, the four broad categories were used because they provide a useful, high-level indicator of diversity at the broadest scale.

Table 9 – Total Jobs and Earnings Across all Four Economic Sectors (2000) and Economic Diversity Index

County	Jobs	Wages (1996 $ in millions)	Shannon-Weaver Diversity Index[a]
Athens	27,760	$661.94	0.77
Gallia	16,340	$389.19	0.79
Hocking	10,300	$228.19	0.87
Jackson	15,270	$352.94	0.84
Lawrence	19,220	$392.54	0.81
Monroe	7,470	$189.10	0.94
Morgan	5,670	$135.55	0.95
Noble	5,300	$105.57	0.94
Perry	11,040	$227.54	0.92
Scioto	33,220	$778.81	0.75
Vinton	3,570	$74.60	0.92
Washington	33,740	$837.38	0.74
Forest-wide total	188,900	$4,373.35	0.86
State	6,880,900	$212,522.13	0.62

Sources: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300 and Shannon, C.E. & Warren Weaver. 1949. The Mathematical Theory of Communication. Urbana: The University of Illinois Press. and Zar, Jerrold H. Biostatistical Analysis. 1996. New Jersey: Prentice Hall.

[a] Calculated with Shannon-Weaver's index of diversity: $J' = H'/H'_{max}$ where $H' = \Sigma\ p_i \log p_i$ and $H'_{max} = \log k$ p_i = the proportion of total employment of the region that is located in the *i*th economic sector and k = number of economic sectors. All indices range between 0 (no diversity) and 1.0 (perfect diversity).

In the future, job trends are expected to favor employment primarily in the Wholesale Trade, Retail Trade, FIRE, and Services sector. In the Forest-wide region, this sector is projected to account for 108,580 jobs and generate $2,017,910,000 in wages (See Table 10). This sector is expected to consist of 52% of jobs and 39% of wages across all sectors in the region. The second-largest sector is expected to be Construction, Manufacturing, and Transportation, which is projected to generate 46,590 jobs and $1,669,850,000 in wages. This sector is expected to comprise 22% of jobs and 32% of wages across all sectors in the region by 2010.

Comparing the region to the state as a whole, it is likely that the region will continue to be more dependent on the Farming, Agricultural Services, and Mining sectors and Government Sectors in the future. In the region, the Farming, Agricultural Services, and Mining sector is expected to comprise 7% of jobs and 3% of wages, compared to just 3% of jobs and 1% of wages statewide in 2010. The Government sector is expected to produce 38,780 jobs and yield $1,330,450,000 in wages. In 2010, the Government sector is expected to account for 19% of jobs and 26% of wages, compared to 11% of jobs and 14% of wages statewide. In contrast, the region is projected to be less dependent than the state on the Wholesale, Trade, Retail Trade, FIRE, and Services sector. In 2010, this sector is expected to account for 52% of jobs and 39% of wages, compared to 61% of jobs and 50% of wages statewide.

Table 10 – Projected Jobs and Earnings (1996 $) by Economic Sector (2010)

	Farming, Agricultural Services, and Mining		Construction, Manufacturing, and Transportation		Government		Wholesale and Retail Trade, Finance/ Insurance/Real Estate, and Services	
Location	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**	**Jobs**	**Wages (millions)**
Athens	1,010	$5.10	3,030	$74.99	11,680	$433.14	15,740	$294.98
Gallia	1,140	$3.17	3,710	$146.72	2,210	$80.45	11,070	$242.50
Hocking	720	$6.72	3,570	$116.40	1,930	$67.98	5,410	$84.13
Jackson	1,340	$40.00	6,500	$209.39	1,860	$62.98	7,920	$137.05
Lawrence	790	$3.87	4,070	$136.66	4,660	$144.53	11,820	$179.38
Monroe	1,460	$25.09	2,870	$121.39	1,060	$30.25	2,290	$28.89
Morgan	1,110	$26.20	1,710	$70.19	840	$25.23	2,440	$32.43
Noble	850	$8.54	1,090	$40.31	1,340	$39.48	2,760	$39.97
Perry	1,420	$16.74	3,420	$110.91	2,000	$55.92	5,600	$93.56
Scioto	1,140	$7.25	6,260	$229.17	6,510	$235.69	22,590	$450.28
Vinton	330	$4.32	1,080	$32.99	970	$26.22	1,660	$26.78
Washington	2,480	$20.84	9,280	$380.73	3,720	$128.58	19,280	$407.96
Forest-wide	13,790	$167.84	46,590	$1,669.85	38,780	$1,330.45	108,580	$2,017.91
Sector as a % of all sectors forest-wide	7%	3%	22%	32%	19%	26%	52%	39%
State	191,750	$3,286.38	1,923,210	$89,490.75	874,760	$35,365.21	4,625,070	$128,543.77
Sector as a % of all sectors statewide	3%	1%	25%	35%	11%	14%	61%	50%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

2.3 Impacts of Wayne National Forest Land Acquisition and Ownership

In considering issues for revision of the 1988 Wayne National Forest Land and Resource Management Plan, the program of land acquisition and the management of lands and boundary are of primary importance. Given the high level of ownership fragmentation within the Wayne National Forests' purchase boundary, efforts since 1935 have aimed to acquire land to create more contiguous ownership. By 2001, the Wayne National Forest had acquired 232,926 acres, or approximately 28 percent of the area within its modified Proclamation Boundary, which encompasses 833,990 acres. In 2001, the following totals were reported for each county (See Table 11).

Table 11 – Wayne National Forest Acreage in the Twelve Counties, 2001

County	WNF Acres	Proclamation Acres	Total Acres in County	FS as % of County
Athens	18,365	81,213	322,560	5.6%
Gallia	16,954	106,017	286,075	5.9%
Hocking	24,151	59,174	269,440	8.9%
Jackson	1,701	7,440	265,792	0.6%
Lawrence	68,843	157,766	291,520	23.6%
Monroe	24,137	142,854	291,200	8.2%
Morgan	3,328	7,637	269,440	1.2%
Noble	694	5,531	254,976	0.2%
Perry	22,257	79,798	262,080	8.4%
Scioto	11,625	32,438	391,040	2.9%
Vinton	1,869	27,239	263,040	0.7%
Washington	39,002	126,883	410,240	9.5%
Total	232,926	833,990	3,577,403	6.5%

Acquisition of parcels to add to the Wayne National Forest land base follows three key elements: available federal funding, willing sellers (the Forest Service has not exercised eminent domain to acquire land in Southeast Ohio), and decisions by Forest officials that the lands are high priority for acquisition. Priorities for land acquisition, as described in the Forest's 1988 Land and Resource Management Plan, are as follows:

- Management Area 2.1: Land along canoeable and fishable streams that can be managed to emphasize vegetative conditions that protect and enhance visual quality and protect high quality recreation opportunities.
- Management Area 6.1: Land where vegetative conditions provide habitat for a variety of native wildlife, particularly for species that require mature or over-mature hardwoods and are sensitive to human activities; high-quality hardwoods on a sustained basis; and dispersed recreation opportunities in moderate amounts in a natural-appearing landscape.
- Management Area 6.2: Land where vegetative conditions provide habitat for a variety of native wildlife, primarily for those adapted to old-growth hardwoods; and recreation opportunities requiring considerable solitude and/or a feeling of closeness to nature.
- Management Area 6.3: Land where vegetative conditions provide habitat for a variety of native wildlife, particularly for species that require mature or over-mature hardwoods and are sensitive to human activities; large, high quality hardwoods on a sustained basis; and dispersed recreation opportunities in moderate amounts in a natural-appearing landscape with relatively large amounts of older tree stands.
- Management Area 8.1: Areas that emphasize preservation of unique ecosystems for scientific purposes and research to better understand natural processes.
- Management Area 8.2: Areas that emphasize preservation and study of unique natural areas.
- Management Area 9.2: Areas that emphasize protection and maintenance of environmental values and protection of the health and safety of the public.
- Other management areas, based on the following considerations:

1. Consolidation - Priority will be given to lands that consolidate national Forest System lands or provide needed access to National Forest System land. An improved ownership pattern will make management more efficient and provide better opportunities for all National Forest activities.
2. Ecology - Priority will be given to lands that have endangered, threatened, or sensitive wildlife or plant species or that provide important or scarce habitat for wildlife species.
3. Recreation - Priority will be given to lands that provide needed recreation opportunities, such as water-based recreation or hiking trails.
4. Cultural Resources – Priority will be given to lands that have significant or important cultural resource sites or that provide buffer zones around such sites.

Recent land acquisition efforts have been met with opposition and criticism, based on concerns that National Forest ownership may discourage residential and industrial development and adversely impact local tax revenues available for counties and school districts. These concerns stem from the fact that federal land cannot be developed for residential or industrial purposes, and that state and local governments cannot tax federal land, so government jurisdictions that include federal lands face a reduced land base on which to levy property taxes. To assess the impacts of National Forest ownership on local tax revenues, it is necessary to understand not only the tax-exempt nature of federal lands, but also the federal payments to local governments that arise from federal land located in their jurisdictions. These federal payments must be compared with property tax revenues that would be expected if the land were privately owned, and placed within the context of other sources of local government funding.

2.3.1 Federal Funding Programs

Although National Forests do not pay property taxes for the land managed by the federal government, the federal government does fund state and local governments through three major programs: the 25 Percent Fund, Payment in Lieu of Taxes (PILT), and a share of mineral royalties.

The 25 Percent Fund provides a means to share 25 percent of the gross revenue from fees collected on National Forest land for activities such as timber, grazing, camping, and special use permit fees. The funds are paid to the states annually and then given to counties where the funds originated, based on National Forest acreage within those counties. The funds must be used for schools and roads. Counties may choose one of two formulae for calculating their payments: the traditional formula based on current year revenue and the newer "Full Payment" option based on the average of the highest three years of revenue during fiscal years 1986 through 1999.

The federal Payments in Lieu of Taxes (PILT) Act of 1976 established funds to compensate county governments for private property taxes forgone due to public ownership[12]. Like the 25 Percent Fund, PILT payments are made to the counties based on acres of National Forest land within the county, but only for National Forest land that was privately owned prior to federal acquisition, called Entitlement Acres. If the lands were already in public ownership, such as those previously owned by the state government, these lands were already tax exempt, so are not considered "entitled" to PILT dollars. This statutory requirement explains why some counties do not receive money for every acre of National Forest land. In addition to Entitlement Acres, PILT payment amounts depend on several additional factors: population of a county, amount of payments from other federal agencies during the previous year, existence of State Pass-through Laws which require other federal payments to be channeled to other local entities rather than county government, and the Consumer Price Index.

A third major federal program that funds states and counties involves mineral royalties generated on federal lands. For lands acquired by the Forest Service under the Weeks Act, which includes Wayne National Forest lands, the federal government shares 25 percent of gross mining receipts with the state. Mineral royalties historically have been added to the 25 Percent Fund, earmarked for schools and roads, but after 1992 an administrative change shifted these payments to a separate fund for counties, not earmarked for schools and roads.

[12] Chapter 69, 31 U.S.C. 6901-6907. Payments in Lieu of Taxes Act.

2.3.2 Payment Trends and Stakeholder Concerns

Data are available to assess trends in federal payments to local governments in the Forest-wide Region from the 25 Percent Fund (including mineral royalties until 1992) and PILT (see Table 12). The 25 Percent Fund payments declined from a high in 1985 of $192,525 to a low of $11,400 in 1996. This decrease coincided with a trend of timber production decline across all National Forests starting in the 1980s, as well as litigation against the Wayne National Forest brought by the Sierra Club that halted virtually all new timber sales there. In addition, after 1992 mineral royalties were managed via a separate reporting and delivery system, rather than added to the 25 Percent Fund. Together these changes precipitated a decrease of approximately 94 percent, between 1985 and 1996, in the total real dollars available for disbursement from the federal government for roads and schools within the 12 counties.

Table 12 – PILT and 25 % Fund Payments to Counties in the WNF, Inflation Adjusted

YEAR	Actual Acres	PILT	25% Fund	Total	Inflation Adjusted[a]	Adjusted per actual acre
1970	140,250		$11,785	$11,785	$47,658	$0.33
1971	146,789		$11,619	$11,619	$45,012	$0.30
1972	153,917		$22,026	$22,026	$82,685	$0.44
1973	159,401		$19,854	$19,854	$70,164	$0.44
1974	161,956		$9,666	$9,666	$30,766	$0.19
1975	163,345		$32,274	$32,274	$94,110	$0.58
1976	166,085			$33,545	$92,483	$0.57
1977	168,350			$144,612	$374,400	$2.22
1978	170,173			$158,361	$381,086	$2.24
1979	172,766			$147,145	$318,008	$1.84
1980	174,641			$146,516	$278,966	$1.60
1981	176,527			$146,751	$253,292	$1.43
1982	176,787	$72,335	$89,550	$161,975	$263,371	$1.48
1983	177,150	$33,615	$75,386	$109,001	$171,676	$0.96
1984	177,701	$37,201	$155,511	$192,712	$287,975	$1.62
1985	177,977	$56,567	$192,525	$249,092	$363,176	$2.04
1986	177,977	$17,143	$95,448	$112,591	$161,230	$0.91
1987	178,965	$17,689	$176,267	$193,956	$267,853	$1.50
1988	186,395	$38,975	$92,636	$131,611	$174,516	$0.94
1989	186,395	$18,694	$171,536	$190,230	$240,640	$1.29
1990	197,938	$50,311	$134,296	$184,607	$221,528	$1.12
1991	202,751	$19,951	$150,639	$170,590	$196,519	$0.97
1992	211,707	$20,583	$132,986	$153,569	$171,690	$0.81
1993	217,758	$22,023	$37,692	$59,715	$64,850	$0.30
1994	218,809	$30,606	$30,110	$60,716	$64,298	$0.29
1995	221,707	$129,096	$15,554	$144,650	$148,989	$0.67
1996	227,055	$216,199	$11,400	$227,599	$227,599	$1.00
1997	227,128	$141,106	$16,380	$157,486	$154,021	$0.68
1998	228,401	$150,237	$13,663	$163,900	$157,853	$0.69
1999	229,654	$156,524	$22,984	$179,508	$169,096	$0.74

[a] Inflation figures adjusted are based on 1996 dollars. See www.jsc.nasa.gov/bu2/infateCPI.html

In contrast with 25 Percent Fund payments, PILT payments to counties in the Forest-wide region have increased substantially in recent years. In 1995, Congress passed new PILT legislation that set a schedule for increasing PILT payments. Although Congress has never fully funded the new authorized payment levels, PILT payments to Forest-wide region counties did increase substantially after 1994 (see Table 12 above).

Despite increasing PILT payments, the decreased 25 Percent Fund payments depressed total federal payments to local governments. Combined PILT and 25 Percent Fund payments dropped from $249,092 in 1985 to under $40,000 in 1993 and 1994 before rebounding somewhat to $227,599 in 1996. During this time, the Wayne saw a significant increase in funds available for acquisition of lands. Federal ownership on the Forest increased by more than 43,000 acres between 1989 and 1999, further diluting the available 25 percent Funds available for school districts within the Wayne on a per-acre basis (see Table 12 above).

In addition to the payments for PILT, revenue sharing and mineral royalties cited above, counties also receive additional direct payments or project dollars for other services provided to the National Forest. Counties with National Forest lands are eligible for funding under the Forest Highway Program administered by the Federal Highway Administration. Counties may enter cooperative law enforcement agreements with the U.S. Forest Service to be reimbursed for expenditure of funds in support of law enforcement activities on National Forest lands. Local fire departments may enter cooperative agreements to reimburse them for forest fire-fighting response. And eligible communities within the National Forest may apply for Rural Development grants administered by the U.S. Forest Service State and Private Forestry. Table 13 below shows that the average annual combined federal reimbursements and payments to the 12 counties within the Wayne has been approximately $2.79 per acre.

Table 13 – All Forest-related Federal Payments to the 12 Counties

Source	*Year 1997*	*Year 1998*	*Year 1999*	*Year 2000*	*Year 2001*
PILT	$141,106	$150,237	$156,524	$168,320	$237,758
Revenue Sharing	$16,380	$13,663	$22,984	-$3,116	$40,419
Mineral Royalties	$19,209	$14,853	$16,914	$15,858	$23,193
Coop LE	$35,000	$49,000	$36,500	$32,800	$32,500
Forest Highways	$586,856		$250,123	$507,304	$550,000
Road Projects					$49,698
Fire Equip Rentals	$10,000	$10,000	$10,000	$10,000	$10,000
Total	**$808,551**	**$237,753**	**$493,045**	**$731,166**	**$943,567**
Forest Acres	227,128	228,401	229,654	231,290	232,926
Average per acre	$3.56	$1.04	$2.15	$3.16	$4.05

Five-year average payment per acre: $2.79

In response to substantially lower federal 25 Percent Fund payments after 1992, and increasing federal land ownership, some citizens in southeastern Ohio became increasingly concerned that federal ownership of land in the region was having a negative effect on the tax base. The PILT program was targeted in particular, and most objections were based on its effect on the area's schools, even though the only program that directly reimburses schools is the 25 percent Fund (PILT and mineral royalty payments are made directly to the general fund of each county).

The tax base issue came to a head in the early 1990's, with the harshest criticism coming from people in Washington and Lawrence Counties. Subsequently, in a 1995 appropriations bill, Congress included language that created a moratorium on the purchase of land by the Wayne National Forest within Lawrence, Washington, Monroe, and Gallia Counties in Ohio. The language was subsequently removed in the Fiscal Year 2000 appropriations bill. State legislators also took action on this issue. In 1999, the representative from Marietta introduced a bill in the Ohio legislature to amend the State

of Ohio's consent law. The bill passed in the Ohio House of Representatives but did not come to a vote in the Ohio Senate in November 2000.

During the public comment period following publication of the 2002 Notice of Intent to revise the Forest's Land and Resource Management Plan, the Forest Service received many comments expressing concerns about land ownership.[13] Some of these comments suggested that the Wayne National Forest should aggressively seek to acquire land. For example:

> *I think we should set a goal in Ohio of quadrupling the amount of public land in Ohio. That way we won't have to be fighting each other for every little bit of state land, of public land that is open to the people. Public land is a great democratic accomplishment. I think in order to defend public land, you have to go—we have to go and start talking about something here… We have to resurrect a notion called the common good. The common good, not the individual greed, not what's in it for me, but to reap what is in it for us as a people. And public land is one of the great accomplishments of our country and we have to go and preserve it and expand it greatly. Quadruple the amount of public land in the State of Ohio in the next 10 years, quadruple it again, then we won't be fighting over the miserable scraps that we have* [Comment #569].

On the other hand, some commenters expressed the opinion that further federal land acquisition would have large negative impacts. These concerns can be placed into two broad areas of concern. The first is that federal land ownership greatly reduced opportunities for business and residential development. While business development is valued for the jobs it can provide, residential development is seen as an important strategy for obtaining school funding from other agencies. For example, one commenter wrote:

[13] Wayne National Forest, Content Analysis Summary of Public Comments received on the Notice of Intent to revise the Forest Land and Resource Management Plan of the Wayne National Forest, 2002.

> *Wayne National Forest owns almost 10 percent of Monroe County. They go in where there's not a lot of population, but there's a lot of forest where they—it hasn't been cut down for economic development, so we're already kind of poor to begin with, and as more land acquisition that Wayne does, the more it hurts the local economy . . .* (Comment #525)

Another wrote about residential development:

> *The Frontier Local School District is 104,000 acres, almost all within the Wayne National Forest. The Wayne National Forest now owns approximately 39,000 acres of our District or 39 percent. Our District receives a very small amount of money from the WNF for the 39,000 acres. . . We suffer from loss of land where people can come to live in the future, because students provide [approximately] $4,200 each from other governmental agencies, each year. If only 10 percent of the currently held land of the WNF was privately held and families with one child per 50 acres this would provide 78 more students and [approximately] $327,600 yearly. We want to retain the student enrollment numbers we now have and see them grow in the future. If the Wayne continues to grow the school system will cease to exist and the WNF and the out-holders will have won."* (Comment #354)

The second area of concern is that federal land ownership might have a net negative impact on local government revenues, since the federal government does not pay property taxes. As one commenter wrote, "I'm totally against more land acquisition in Monroe County. It has severely hurt our tax days" (Comment #522).

2.3.3 Ownership Impacts on Development

One measure of the impact of the National Forest land base on the potential for future development of land within the 12 counties is to correlate the relative acreage of the Wayne in each county with the acreage enrolled in Current Agricultural Use Valuation (CAUV). CAUV lands are, by definition, undeveloped. While the purpose of the CAUV program is to retain open space in Ohio, lands in CAUV are available for development if the current owner (1) chooses to develop the property rather than continue with agricultural pursuits, and (2) repays the prior three years of tax savings resulting from CAUV enrollment. The following is a brief explanation of the CAUV program:

> In the early 1970's, agricultural landowners faced rising property taxes as law changes increased the property assessment rate, the economy experienced high inflation, and growing metropolitan areas exerted their development pressures. To help reduce the tax burdens on agricultural landowners, a statewide referendum was passed in 1974 to amend the Ohio Constitution (Article 2, Section 36) and allow agricultural land value to be based on its current use rather than its potential use (referred to as highest and best use value, or HBUV). The resulting legislative program is called current agricultural use valuation, or CAUV. Based on data from the Department of Natural Resources, LBO (Legislative Budget Office) estimates that 20 percent of CAUV land in Ohio is timberland (3.2 million acres).[14]

In all counties, CAUV lands significantly exceed the amount of National Forest lands (See Table 14). Based only on the amount of open space represented by CAUV, these figures suggest that all 12 counties have sufficient additional lands now enrolled in CAUV that could be developed if market conditions warranted.

[14] Petry, Jeff. Policy Brief, Current Agricultural Use Valuation. Ohio Legislative Budget Office. March 8, 2000.

Table 14 – CAUV Enrolled Acreage in the 12 Counties of the Wayne National Forest, 2001

County	WNF Acres	WNF % of County	Total acres in County	CAUV Acres	CAUV % of County
Athens	18,365	5.6%	322,560	92,143	28.6 %
Gallia	16,954	5.9%	286,075	136,953	47.9 %
Hocking	24,151	8.9%	269,440	54,728	20.3 %
Jackson	1,701	0.6%	265,792	69,616	26.2 %
Lawrence	68,843	23.6%	291,520	110,006	37.7 %
Monroe	24,137	8.2%	291,200	146,607	50.3 %
Morgan	3,328	1.2%	269,440	133,567	49.6 %
Noble	694	0.2%	254,976	93,980	36.9 %
Perry	22,257	8.4%	262,080	102,124	39.0 %
Scioto	11,625	2.9%	391,040	183,580	46.9 %
Vinton	1,869	0.7%	263,040	62,776	23.9 %
Washington	39,002	9.5%	410,240	169,293	41.3 %
Total	232,926	6.5%	3,577,403	1,355,373	37.9 %

Source: The Ohio Department of Taxation.
http://www.state.oh.us/tax/Publications/Tax_Data_Series/PD32/pd32cy01.htm, accessed 9/30/03.

Further analysis, over time, also indicates that the presence of national forest lands in the region is not crowding out development opportunities. In all 12 counties, the amount of acreage enrolled in CAUV increased between 1990 and 2000 (see Table 15). The increases ranged from 9.14 percent in Washington County to 42.39 percent in Hocking County, with a Forest-wide average of 20.55 percent. This overall increase in CAUV enrollment suggests two conclusions. First, there does not seem to be such a bidding war for undeveloped land in the 12 counties that would preclude landowners from electing to preserve open space for the benefit of the tax benefit. Second, many land owners in the region do not likely anticipate near-term demand for development, as they would have to repay the prior three years of tax savings if CAUV lands were to be converted to other uses

Table 15 – CAUV Enrollment by Year in the 12 Counties of the Wayne

Year	Athens	Gallia	Hocking	Jackson	Lawrence	Monroe	Morgan	Noble	Perry	Scioto	Vinton	Washington	Forest-wide
1990	61,363	118,854	31,002	53,143	93,335	115,395	109,008	68,159	80,667	141,246	39,937	153,549	1,065,658
1991	62,834	120,432	30,557	54,108	95,089	116,377	110,629	72,633	83,182	143,030	39,822	155,165	1,083,858
1992	66,302	121,062	32,796	55,854	98,372	117,604	112,363	74,753	85,485	148,805	39,311	157,709	1,110,416
1993	71,570	119,609	37,584	58,363	101,469	123,291	114,662	80,056	86,652	151,090	42,921	159,253	1,146,520
1994	75,563	123,711	38,880	61,486	103,235	129,047	118,865	81,738	87,458	154,734	44,951	146,631	1,166,299
1995	80,654	123,196	39,955	60,402	104,227	131,491	121,307	83,358	90,609	156,121	48,534	139,843	1,179,697
1996	85,919	125,054	40,646	62,526	105,948	135,330	120,847	83,993	94,328	162,415	48,819	155,977	1,221,802
1997	87,047	128,189	41,252	65,867	107,403	138,764	126,599	87,994	95,581	165,019	50,232	157,784	1,251,731
1998	89,134	130,430	50,778	66,637	107,605	141,587	127,988	89,438	96,976	169,300	52,774	158,732	1,281,379
1999	90,163	131,679	52,768	68,065	109,047	142,417	129,421	91,494	98,384	180,474	55,355	163,006	1,312,273
2000	93,018	135,367	53,817	68,768	109,839	144,775	131,827	93,281	104,138	178,480	59,061	168,999	1,341,370
Net Change	31,655	16,513	22,815	15,625	16,504	29,380	22,819	25,122	23,471	37,234	19,124	15,450	275,712
Percent Change	34.03%	12.20%	42.39%	22.72%	15.03%	20.29%	17.31%	26.93%	22.54%	20.86%	32.38%	9.14%	20.55%

Source: Ohio Department of Taxation, http://www.state.oh.us/tax/publications_tds_property.html#Abstracts, accessed 9/30/03.

It should be noted that not all open, undeveloped acreage in each county is enrolled in CAUV. Some undeveloped properties are enrolled in other abatement programs, such as Forest Tax law. Other lands available for development may not be enrolled in a tax abatement program. Still other lands may have a current use that is less than the optimal use, and so are available to be developed to a higher degree.

Given the current levels of undeveloped, privately owned land in Southeast Ohio, there is minimal potential for conflict between conservation by the Forest Service and development by residential, commercial and industrial interests. Even if the Wayne grows to the 322,000 acres envisioned by the 1988 Land and Resource Management Plan, the additional acres would represent only a seven percent reduction in the 1.2 million acres currently enrolled in CAUV. At the predicted 322,000 acres, the Wayne would hold less than 10 percent of the total 3.5 million acres in the 12-county region.

Additionally, Wayne National Forest priorities for land acquisition do not conflict with land needs for future commercial or industrial development. As described in section 2.3 above, the Forest's priority for consolidation targets existing in-holdings surrounded by National Forest lands. Generally, in-holdings are remote areas that would be less desirable for commercial or industrial development because they lack:

1. Access to highways for transportation of resources or products. No interstate highways pass through the Wayne. Only two restricted access highways lie within the Proclamation Boundaries. Few of the state and county roads within the Forest were designed for heavy industrial use.

2. Access to utilities, including water and sewage lines for industrial and commercial sites. The rural areas in the National Forest rely heavily on wells and septic systems, which are generally insufficient to support the demands of industrial or commercial users.

3. An available labor pool. While rural communities often have high unemployment rates, the population is often so scattered that companies find it difficult to recruit a qualified workforce in remote areas. Currently even larger Appalachian communities, like Ironton and Nelsonville, are struggling to attract new employers. It seems unlikely, therefore, that potential employers would locate a business or factory in a remote area, away from a population center and ready transportation.

There are occasions when another use is identified for National Forest System lands that best serves the public interest. In those cases, the Forest Service is willing to complete land exchanges. The Wayne has participated in land exchanges that benefit communities struggling with new needs resulting from development, such as new school construction in the Rock Hill School District of Lawrence County or a new sewage plant in New Straitsville, Ohio.

Although the in-holdings in the National Forest may not be suitable for commercial or industrial development, they are very attractive to private individuals for development as housing for year-round residence as well as weekend retreats. Indeed, "gateway" communities to public forest and park lands nationwide are becoming increasingly popular for residential development. Thus federal land ownership may actually foster residential development on private land nearby, even as it prevents residential development on federally owned parcels.

2.3.4 Ownership Impacts on Local Tax Bases

Property taxes are a critical source of revenue for many local government jurisdictions. Since National Forest lands are tax-exempt, there is potential for federal ownership to negatively impact local tax bases. Analyses described below, however, suggest that the preclusion of private residential development on federal lands actually helps county government finances because service and infrastructure costs in rural places often exceed property tax revenues associated with residences. In addition, federal payments are frequently higher than property tax collected on CAUV-enrolled lands in the counties. Moreover, many counties in the Forest-wide region do not exceed state average of county tax-exempt holdings, as other counties have higher levels of non-federal tax-exempt holdings (churches, state lands, universities, etc.). Also, the impact of declining 25 Percent Fund payments to schools is lessened by the relatively small portion of school funding that comes from this source, compared to other sources. Finally, counties may gain increased sales tax revenues as visitors to the National Forest spend money. Several opportunities exist for local jurisdictions in the Forest-wide region to increase revenues.

2.3.4.1 Residential Development Tax Revenues and Service Costs

As described in Section 2.3.3, federal ownership precludes residential development on federally owned parcels. But this does not necessarily negatively impact local government finances. Even though residential development can generate tax revenues, it can incur substantial public costs. Several studies have closely examined the economic impact of residential development in rural areas. As reported in a National Park Service study[15], residential development almost always results in increased public service requirements, for example transportation and utility costs including roads, utilities, sanitary sewage, water, natural gas, and electricity; as well as service costs including libraries, recreation, schools, health care, police and fire protection, and solid waste collection and disposal. In many situations, the cost of providing these services greatly exceeds the tax revenues generated from the development.

In an analysis of the economic impacts of open space, the planning department in Duchess County, New York found that farms and other types of open land can actually subsidize local government by generating more in property taxes than they demand in services. Residential lands required $1.12 to $1.36 for every tax dollar contributed, while agricultural lands required only $0.21 to $0.48 for every dollar (Sayer, 1994).[16]

According to an American Farmland Trust (1986) study of Loudoun County, VA, "over a wide range of development densities . . . the ongoing public costs of new residential development will exceed the (public) revenues from such development." Of those units analyzed, annual revenues per thousand dwellings were between $2.7 million and $2.9 million, while costs averaged between $3.5 and $5.0 million. The annual net deficit per thousand units ranged from $0.6 million to $2.3 million (1986 dollars). The greatest predicted shortfall was for the lowest-density units, termed by the Trust as "rural sprawl." For all densities, school expenses were the largest proportion of total costs (American Farmland Trust, 1986).[17]

In Culpepper County, Virginia, the average new residential unit can be expected to produce a deficit in the County budget of $1,242 (1988 dollars) (Larson and Vance,

[15] National Park Service. Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors. 1995.
[16] Ibid.

1988). According to the authors, this study addresses the widespread but erroneous perception that residential growth, in expanding the tax base, somehow contributes to local fiscal health. Although residential development results in increased revenues from the real estate tax and other sources, it simultaneously increases demand for public service expenditures and generates the need for expanded public facilities.[18]

A companion study concluded that for every dollar of tax revenue collected from residential land uses in Culpepper County in 1987, $1.25 was spent on county services. For every dollar collected from industrial/commercial or farm/forest/open space lands, only $0.19 was spent on services (Vance and Larson, 1988).[19]

A similar study conducted by the Davey Resource Group of Kent, Ohio, found that in Shelby County, Ohio, "for every dollar raised from residential land use related revenues, Shelby County spent $1.11 in direct services." The study also demonstrated the manner in which farm, forest, and open space land uses were positive fiscal contributors to the county's bottom line. Specifically, "for every dollar raised to provide public services for farm, forest and open space uses, only $0.29 was spent to provide services to these land uses."[20] A comparison of the relative costs of providing services to different land uses as a percentage of tax revenue from that land use appears in the Table 16.

---

17 Ibid.
18 Ibid.
19 Ibid.
20 Reiss, Tracy L., Cost of Community Service Study, Shelby County, Ohio.

Table 16 – Cost of Servicing Different Land Uses as a Percentage of Tax Revenue Received

Study Location	Residential Development	Commercial Development	Farmland, Forest, and Open Space
Culpepper County, VA	125%	19%	19%
Connecticut average	106%	47%	43%
Massachusetts average	112%	42%	33%
New York average	124%	23%	35%
Town of Dunn, WI	106%	29%	18%
Lake Elmo, MN	107%	20%	27%
Independence, MN	103%	19%	47%
Farmington, MN	102%	79%	77%
Madison, OH	167%	20%	38%
Madison Township, OH	114%	25%	30%
Average	116%	32%	37%

Source: The Economics of Urban Sprawl. Water Protection Techniques. June, 1997

These studies show that the costs of support services that counties provide to residential developments typically average $1.16 for every dollar in tax revenue raised from that source. Support services for farmland, forests and open space typically cost counties about $0.37 for every dollar in tax revenue.

In contrast to residential development, National Forest lands generate payments to counties but do not require public services such as schools, utilities, water and sewage, or solid waste collection and disposal. National Forests directly reimburse counties for some public services through programs such as law enforcement cooperative agreements (recall Table 13 above). Fire departments are reimbursed for fighting fires on Forest land with grants administered through the Ohio Department of Natural Resources. Counties are eligible for road maintenance assistance through the Ten Percent Program. After massive flooding in 1997 and 1998, the Forest Service provided more than $2 million to repair roads within the 12 counties. Also, rural and community economic development and promotion of tourism and travel can be assisted by funding available to the Federal Highway Administration (FHWA). These payments are in addition to the major funding sources described in Section 2.3.1: The 25 Percent Fund, PILT, and mineral royalties.

2.3.4.2 Comparing Federal Payments to Property Taxes Paid by Residents

Property taxes vary widely depending upon the type of land, current usage and improvements. The use of CAUV rates as a comparison to estimate the potential tax on current National Forest lands is reasonable because much of the Wayne National Forest was enrolled in CAUV at the time it was acquired by the Forest Service. In addition, nearly all National Forest lands would qualify for CAUV if the land were privately owned and remained undeveloped. Across the sample taxing districts shown in Table 17 below, private lands enrolled in CAUV generated between in $1.48 and $2.82 in 2000. These taxes per acre are generally less than the five-year average (1997-2001) for all federal payments, which was $2.79 per acre (recall Table 13 above).

Table 17 Sample of Tax Revenue Generated by CAUV Lands in Southeast Ohio

County	Township	School District	CAU Value of Land[a]	CAU Value	Millage	Tax Revenue	CAUV Acres	$ Per Acre
Hocking	Ward	N-Y SD	$978,620	$342,530	44.475300	$15,234.00	8,091.94	$1.88
Gallia	Walnut	Symmes Valley	$327,200	$114,500	35.897604	$4,110.28	1,569.56	$2.62
Lawrence	Symmes	Symmes Valley	$791,930	$277,450	34.890104	$9,680.26	5,540.38	$1.74
Lawrence	Lawrence	Rock Hill	$131,610	$46,140	30.562669	$1,410.16	824.76	$1.71
Lawrence	Windsor	Symmes Valley	$2,625,730	$919,880	35.151149	$32,334.84	15,767.00	$2.05
Monroe	Graysville	Switzerland	$53,160	$18,610	32.674180	$608.00	358.00	$1.78
Noble	Elk	Switzerland	$634,380	$222,160	51.000000	$11,330.16	4,014.54	$2.82
Vinton	Knox	Alexander	$16,670	$5,840	41.046792	$239.72	161.00	$1.48

[a] Based on Auditor Reports of Abstract Values of Land Trust According to its CAU Values, 2000.

2.3.4.3 Relative Impact of All Tax-exempt Properties on Counties within the Forest-wide Region

All counties have some properties that are tax exempt. Besides federal lands, such properties might include state lands, colleges, universities, churches, parks, and fire departments. One measure of how much impact the National Forest has on the local tax base is to compare the level of tax-exempt properties within the Forest-wide counties against the state average.

As shown in Table 18, six of the 12 counties within the Wayne have tax-exempt valuations below the statewide average. In the other counties, other large holdings may account for a greater percentage of the exempt assessment than the National Forest. For example, Athens County has the second highest tax exempt percentage of total assessed valuation in the state, behind only Pike County. Athens County includes Ohio University, Hocking College and Ohio Department of Natural Resource lands. In Scioto County, the largest holder of tax-exempt valuation is the State of Ohio, where the county includes a state college and a state forest. Only in Monroe County did the federal government hold the largest percentage of tax-exempt property in the year 2000. Yet Monroe County is below the statewide average for tax-exempt property. These figures suggest that the presence of a National Forest has not created an undue burden in the Forest-wide region due to the tax-exempt nature of federal lands.

Table 18 – Percentage of each County's Assessed Valuation Reported on All Tax-Exempt Real Property (2000)

County	Percent Exempt
Athens	32.40%
Gallia	19.97%
Hocking	13.20%*
Jackson	11.29%*
Lawrence	14.98%
Monroe	10.90%*
Morgan	9.38%*
Noble	21.09%
Perry	11.55%*
Scioto	25.98%
Vinton	12.36%*
Washington	14.18%
Statewide average	**13.92%**

Source: Ohio Department of Taxation. Total Valuation of Real Property. 2000.

* Below statewide average.

2.3.4.4 Relative Impact of National Forest Ownership on School Funding

As described above (Table 12), 25 Percent Fund revenues declined substantially after 1992. Since 25 Percent Fund payments are earmarked for roads and schools, this raised considerable local concern over school funding for the 17 school districts in the Forest-wide region. However, analysis reveals that the reduction in federal impacts did not significantly impact school districts, owing to the relatively small share of school funding provided by the 25 Percent Fund.

Table 19 shows the average enrollment for each district and the average 25 Percent Fund payment per pupil, reported in disbursed dollars. The 25 Percent Fund payment averaged $5.89 per pupil in 1985 and just $0.51 per pupil in 1996. In 1985, the school districts' average spending per pupil (all funds) was $3,280. At its peak, 25 Percent Funds represented approximately two tenths of one percent of the total per-student funding for each school district within the Wayne. As such, it seems unlikely that the decrease in 25 Percent Fund payments could constitute a significant financial problem for any of the school districts.

Table 19 – Average 25 Percent Fund revenue per Student Based on Total Enrollment

School District	*1985*	*1990*	*1995*
Nelsonville-York	$ 1,671	$ 1,577	$ 1,552
Trimble LSD	1,157	1,128	1,082
Gallia County LSD	3,085	3,188	3,085
Logan-Hocking LSD	3,780	3,812	4,052
Oak Hill Union LSD	1,442	1,311	1,366
Dawson-Bryant LSD	1,556	1,311	1,356
Rock Hill LSD	2,218	2,058	2,021
Symmes Valley LSD	1,006	992	1,044
Switzerland of Ohio LSD	4,057	3,575	3,268
Morgan LSD	2,689	2,735	2,751
Southern LSD	1,132	1,026	1,103
Bloom-Vernon LSD	1,211	1,184	1,207
Green LSD	821	835	824
Wheelersburg LSD	1,760	1,729	1,633
Vinton County LSD	2,517	2,444	2,438
Fort Frye LSD	1,329	1,339	1,275
Frontier LSD	1,238	1,122	1,072
Total Enrollment	32,669	31,366	31,129
25% Fund per student	$5.89	$4.28	$0.50
25% Fund per student in constant dollars (1996)	$8.59	$5.14	$0.51

Source: Ohio Department of Education, http://ode000.ode.state.oh.us/

This relatively small impact of 25 Percent Funding decline on school funding is reflected in aggregate measures of school district finances, relative to other school districts in the State. The Ohio Department of Education ranks school districts statewide based on various factors, including revenues and expenditures per student. There was no substantial increase in the number of school districts within the Wayne National Forest among the schools ranked among the bottom 50 for revenue per student (all funds) between 1985 and 1996.[21] Because of the small margin of differences in funding, school districts seem to appear and disappear from the rankings with regularity, perhaps related to individual school bond issues. For example, Frontier Local School District, Washington County, ranked 39th from the bottom in 1985 for total revenue per student from all sources. Frontier Local then disappeared from the bottom 50 ranking for 10 years, reappearing at position 12 in the bottom 50 in 1996. However, it may be a mistake to assume this relates to the 25 percent Fund decline; adjacent Warren School District, Washington County, appeared on the 1996 list at position 11. There are no National Forest lands in Warren School District.

Addressing school funding concerns requires considering factors beyond property tax dollars and federal payments via forest revenue sharing. School districts also receive state education funds in the form of Foundation Payments and Parity Aid, as well as funding for special programs. The intent of these state revenue streams is to provide baseline support for all school districts statewide. State funding is linked to assessed valuation of property within a school district, so districts with lower expected property tax revenues are eligible for higher levels of state funding then are districts with higher expected property tax revenues. But expected property tax values are not always realized, especially if a large portion of property is enrolled in tax abatement programs such as Ohio's CAUV program. Thus Southeastern Ohio school districts with substantial CAUV enrollments (recall Table 14 above) face substantial challenges in raising revenues.

[21] Ohio Department of Education, www.ode.state.oh.us

2.3.4.5 Sales Tax Revenues Generated by the Wayne National Forest

The 12 counties with Wayne National Forest land receive tax revenue from spending by visitors to the National Forest. Counties and local communities benefit from local sales taxes as well as local lodging taxes. Table 20 shows county sales tax rates for each of the 12 counties.

Table 20 – Sales Tax Rates by County (September, 2000)

County	Tax Rate
Athens	1.25%
Gallia	1.25%
Hocking	1.25%
Jackson	1.50%
Lawrence	1.50%
Monroe	1.50%
Morgan	1.50%
Noble	1.50%
Perry	1.00%
Scioto	1.00%
Vinton	1.50%
Washington	1.50%

Source: Ohio Department of Taxation, Total State and Local Sales Tax Rates, by County, Effective June 2000.

To estimate the contributions to local tax bases from Forest visitors, one must accurately assess the level of visitor spending. This is challenging in a highly dispersed destination, such as the Wayne National Forest, which has more than 230,000 acres divided across 12 different counties. Nevertheless, prior studies can be used to provide estimates. According to prior studies, spending in the region related to Forest visitation differs between non-local and local visitors. Non-local Forest visitors in the aggregate spend about $31,810,000 annually in the region on recreation in the Wayne National Forest; while local Forest visitors spend an estimated $13,877,500 annually (see further discussion in Section 3 of this assessment).[22]

Counties and community tax rates vary (recall Table 20 above). In the estimates of county tax revenue on visitor spending below, the conservative figure of 1.0 percent is used as the combined sales tax rate because it is the minimum rate across the 12 counties within the Wayne. However, 10 of the 12 counties within the Wayne have higher tax rates, as shown above, so the figures below are low estimates rather than high. No data are available to measure additional revenue for those counties that have passed a lodging tax. Based on these conservative estimates of tax percentage rates, these figures indicate that visitor spending on the Wayne National Forest returns at least $1.90 per acre in sales tax revenue directly to the counties (see Table 21 below). The estimate compares with a MarketVision Research, Inc. summary of the economic impact of tourism in Lawrence County, where the Wayne's Lake Vesuvius Recreation Area and Off-Road Vehicle trails are among the county's most popular attractions. It shows that local tax revenue from tourism is more than $320,000 annually[23].

[22] Non-local visitors: Kriesel, Warren. The Economic Impacts of Outdoor Recreation at the Wayne National Forest, Ohio. 1996. Local visitors: According to the Department of Development 1996 Study, 66 percent of respondents spent between $11 and $80 during a day trip, for an average expenditure of $45.50.

[23] MarketVision Research Inc., Summary of County Impact: Lawrence County, Ohio. 1997.

Table 21 – County Revenue Derived from the WNF (based on 1%)

Source	Value	Tax Revenue
Non-local Visitors	$31,000,000	$310,810
Local Visitors	$13,877,500	$138,775
Total		**$449,585**

2.3.4.6 Opportunities for Local Governments to Increase Revenue

A number of opportunities exist for counties to increase revenues. One avenue is recovery of delinquent taxes. In FY 2000, delinquencies in the 12 Forest-wide counties totaled more than $21 million (Table 22).

Table 22 – Delinquent Property Taxes, Payable and Due in Calendar Year 2000

County	Delinquent Taxes
Athens	$2,238,324
Gallia	$970,656
Hocking	$1,345,395
Jackson	$2,544,590
Lawrence	$4,295,851
Monroe	$651,601
Morgan	$470,396
Noble	$971,930
Perry	$3,562,965
Scioto	$4,548,663
Vinton	$543,402
Washington	$2,173,448

Source: Ohio Department of Taxation, Total Valuation of Exempt Property, 2000. Values include tangible personal property; all real property plus public utility personal property (delinquencies for real and public utility personal property taxes are not separated on the county auditor abstracts); and special assessments.

Another strategy for local jurisdictions to increase funds is to pursue opportunities from federal sources. These are outlined below:

1. Elect the Full Payment option. In 2003, counties have an opportunity to revisit their decision to remain with the 25 percent payment option rather than receiving the Full Payment option under the Secure Rural Schools and Communities Act of 2000. Only three of the 12 Wayne counties elected to receive Full Payment in 2001. Those counties will receive a significantly larger payment than counties

receiving 25 percent Funds because it appears unlikely that the Wayne will return to the timber production levels of the 1980s.

2. Support new pass-through legislation in the Ohio Legislature. A reason that several counties did not select the Full Payment option was the potential for the reduction in PILT payments that typically offsets an increase in revenue sharing. This is a significant issue for county commissioners because revenue sharing funds go to schools and roads, while PILT payments go to the county's general funds. The school district and county engineer administer funding for schools and roads in Ohio; the county commissioners administer the general fund. Under federal regulations, any percentage of revenue-sharing funds directed to schools by state "pass-through" legislation is not subtracted from future PILT payments.
3. Participate in Forest Highways Program meetings. Potential projects are evaluated and prioritized by a panel that includes participants from the Wayne National Forest, the Ohio Department of Transportation and county engineers. In past meetings, county engineers in many counties have not participated.
4. Ensure that the County Sheriff's office maintains an annual cooperative law enforcement agreement**.** Typically this requires the county commissioners to approve advance payment of expenses for law enforcement activities that are then reimbursed by the counties. Currently, not all Forest-wide counties have such agreements.
5. Ensure that local fire departments maintain cooperative fire-fighting and equipment rental agreements with the Wayne National Forest or the State of Ohio. Responsibility for administering the programs is divided between the Forest Service and the Ohio Department of Natural Resources. Counties within the Athens and Ironton Ranger Districts should contact the Forest Service. Counties within the Marietta Unit of the Athens District should contact ODNR.
6. Encourage local communities to pursue appropriate funding for eligible projects through the Forest Service and the U.S. Department of Agriculture. All 12 offices of the county commissioners received a copy of the book "Building Better Places," a reference listing all rural community development grants and programs offered through the Department of Agriculture.

7. Support school districts in the application for Federal Impact Aid**.** School districts that include federal properties are eligible for additional financial support from the U.S. Department of Education. The application process is complicated and requires considerable information from the county tax rolls. County commissioners can encourage the auditor to assist the school districts in gathering this information. As of November 2002, no school district within the Wayne National Forest had applied for Federal Impact Aid.

Finally, counties should ensure that federal payments from revenue sharing (25 percent Fund or Full Payment), PILT and mineral royalties are credited to the appropriate accounts. One study suggested that counties within the Wayne were not distributing those payments to the proper destination.[24] For example, some counties deposited 25 percent Fund monies into the county's general account rather than providing those funds for roads or schools, as Congressional intent dictates.

2.3.5 Summary of Impacts of Wayne National Forest Land Acquisition and Ownership

The presence of the Wayne, with its ongoing land acquisition program, does not appear to be negatively impact economic development in the 12 counties. There are substantial quantities of land remaining in an undeveloped state, represented by CAUV enrollment ranging from 19.9 percent to 49.7 percent of the land base in these counties. In addition, each county may have additional acreage not enrolled in CAUV which may be available for development.

Similarly, analysis suggests that National Forest lands do not negatively affect local tax, when all relevant information is considered. The five-year average for combined federal payments to the counties was $2.79 per acre. Indirect tax revenue from forest visitors is estimated at an additional $1.90 per acre annually. Combined, the estimated total of $4.69 per acre exceeds estimates for CAUV rates in all the sample taxing districts that have Wayne National Forest land. While providing this revenue, the

National Forests do not require the same level of county services as privately owned lands. Several studies show that open and forested lands typically require only about 37 cents in services for every dollar raised in revenue. Residential development, which is most likely in the rural inholdings within the Wayne, typically requires about $1.16 in county services for every $1 in tax revenue contributed.

As timber revenues declined from a peak in 1985, school districts within the Wayne saw their federal revenue sharing decrease. However, the levels of federal revenue sharing do not appear to have been significant to the funding of any individual district. Of greater importance to the school districts is the state's school funding formula, which offsets the presence of National Forest lands by basing its funding formula on the assessed valuation, which does not include tax-exempt lands.

[24] West, Ethan Thomas, Wayne National Forest, An Application of Fiscal Analysis, OSU, 1993.

Section 3: The Role of Natural Resource Industries in Local Economies

An expectation exists at several levels that National Forests should play a role in the economic development of rural communities, whose history has often been tied closely to the area's natural resources. Congress expressed that expectation in the passage of the Multiple-Use Sustained Yield Act, and several subsequent bills authorizing federal revenue sharing and other payment-to-state programs. Several Presidents have echoed the same expectation, through administrative direction to involve the public in forest planning and provide economic opportunities via forest resources. Certainly the expectation exists at the local level, where community members request access to the forest for a variety of purposes.

During the public comment period following publication of the Notice of Intent, the Wayne received comments that supported this point of view. The following excerpt of the public comments is typical of those comments:

> *The drilling and producing of Crude Oil and Natural Gas has been for well over 100 years and remains a very vital part of Southeastern Ohio culture. The resources produced are very important to Ohio State Energy needs while providing jobs for many in the region.*
>
> *The 1988 Wayne National Forest Plan realized the importance of Oil and Gas Resources development on the Wayne. However, my opinion is that the 1988 plan is very vague in outlining the procedures for leasing and approving drilling permits for individual tracts on the Wayne. As a result leasing Federal acreage takes years, and following the leasing process an operator spends another year obtaining a permit to drill.*
>
> *Congress in 1987 under the 1987 Lease Reform Act, enacted law stating that all Government Land Managing Agencies would post available mineral resources for competitive lease sale each calendar quarter. The 1988 Wayne plan does not give line officers and field staff guidelines or directions to follow in leasing single unit acreage.*

Congress currently realizes that resources available to individual forests to carry out leasing projects in a timely fashion is a problem. Under HR 4 currently being debated in Washington both the House of Representatives and the Senate have made money allowances to expedite the function of Oil and Gas leasing and development (Comment 286).

Another commenter observed that the forest was a renewable resource that could help local communities through goods such as timber.

Due to the expense of forest management and land acquisition, I feel that logging is a tool, which can be used to offset these expenses, while stimulating a locally depressed economy. Anyone who has spent anytime in this area of Ohio realizes opportunities for individual growth are not abundant. Trees are a renewable resource and if managed properly can bring economic and biological benefits to the area well into the future. (Comment 374)

Public comments also revealed a significant public opinion that the natural resources on the Wayne should not be developed for economic reasons. A representative comment read:

There are plenty of other places to extract oil, gas and minerals besides our last remaining wilderness areas. The fact that the National Forest system charges by far the lowest fees for extraction, less than private property, simply makes it more profitable for the Oil, gas and mining special interests. This encourages extraction not discourages it. Because this enhances profitability, the National Forests and wilderness areas and our recreational areas are simply being endangered for corporate greed. There are other places to get oil, gas and mining products. Oil, gas and mining should be eliminated completely. It is not a question of "if" these activities will pollute the National Forest. They already have. The water

IS unsafe for drinking making it largely unfit for overnight back packing any where in the forest because of industrial activity. It is useless because you can not replenish water which is necessary to survival. So it cannot be doing anything for the wild life either. It is in fact contaminated already because of these activities (Comment 356).

A few people expressed this opinion quite strongly, as the following example represents:

End commercial logging, all extraction of mineral on Wayne Nat'l Forest. Why? This is public land. The vast majority of land in this nation is deemed private land. Private land is the appropriate place for commercial enterprise. Bringing commerce onto our public lands threatens to have the almighty dollar rule over the balance and health of the Earth. There should be no exceptions. NO COMMERCE on public land!!! There is no reason to extract minerals from our public land! It is not serving the public. All the private land can be damaged and destroyed in this way. NOT ON PUBLIC LAND! We must buy out all mineral rights and get commerce & destruction off our land!! We should stop leasing ANY rights for any commercial enterprise including mineral extraction. Benefit: Health of the earth, balance on land for us and future generations to enjoy. Land managed with health of ecosystem as top priority, NOT PROFIT! (Comment 224)

Several commenters proposed that recreation development could serve as an alternative source of economic development. One commenter cited Forest Service information to support this recommendation to the Plan Revision:

As numerous studies by the Forest Service and other organizations have pointed out, and the effects of other federal land reserves such as National Parks around the country exemplify, prohibiting timber harvest

on the Wayne National forest will ultimately promote tourism and strengthen the economy of towns that surround our national forest.[25]

In fact, the Forest Service performed an analysis in 2000 that specifically analyzed the economic effects of non-commodity interests in the Wayne National Forest.[26]

The Forest Service cited a study that was commissioned by the Forest Service and performed by Dr. Warren Kriesel of the University of Georgia, which concluded that (1) over half of the visitors to the Wayne National Forest were non-local visitors who brought "new" dollars into the southeast Ohio region, (2) that expenditures by forest visitors averaged $82.84 per visitor and contributed almost $32 million to the region in the year that this study was performed, (3) when economic ripple effects were accounted for visitors to the Wayne National Forest boosted the region's economy by almost $46 million in the year the study was performed, and (4) that recreational related spending supported 1,024 jobs and generated almost $25 million in annual income to residents of the region.[27]

As the population in Southern Ohio and adjoining areas continues to rise, and as more recreational opportunities are made available in areas that have increasing aesthetic beauty and biological integrity, there is no reason not to believe that the economic figures cited in the aforementioned reports will continue to rise and that local communities will receive significant benefit from the non-commodity resources available from the Wayne National Forest.(Comment 330)

The prevalence of multiple, diverse, and often conflicting views about management of the Wayne National Forest are in line with attitudes of people in other

[25] *See, e.g.,* John Talberth and Karyn Moskovitz*, The Economic Case Against National Forest Logging* (1999).
[26] Ken Arbogast, *An Overview of the Economic Impact of Wayne National Forest in the Counties of Southeast Ohio*, US Forest Service (2000).
[27] Warren Kriesel, *The Economic Impacts of Outdoor Recreation at the Wayne National Forest, Ohio*, University of Georgia, Athens (September, 1996).

locations toward national forests. For example, in a survey of urban constituents in Boston, Detroit and Minneapolis, 86 percent ranked contributing products and jobs to the national economy as either a somewhat important, very important or extremely important benefit provided by national forests.[28] Asked whether "national forests can be used for recreation and logging and mining at the same time," 48 percent agreed, strongly or somewhat, while 48 percent disagreed, strongly or somewhat. In the survey, 74 percent ranked providing wood for homes and pulp for paper as either a somewhat important, very important or extremely important benefit provided by national forests; yet further asked whether logging and mining should be allowed on national forests, 58 percent of the urban respondents disagreed either strongly or somewhat.

In rural areas such as Southeast Ohio, a diverse array of natural resource products and services provide a potentially important contribution to regional economic development. Products such as timber and other wood products, coal, oil, gas, and minerals from Wayne National Forest lands have fueled economic growth over the years. More recently, recreation has come to play an increasingly important role in regional economic development. Such forest-related industries provide investments in local communities, through direct and indirect employment opportunities, as well as generation of tax revenues for local and state governments.

3.1 Timber and other Wood Products

3.1.1 Historical Development[29]

"Unlike the national parks, which were created primarily to preserve natural beauty and provide outdoor recreation opportunities, the founders of early national forests envisioned them as working forests with multiple objectives. The Organic Administration Act of 1897, under which most national forests were established, states: "No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to

[28] Kearns and West, "Urban Connections,: Boston, Detroit and Minneapolis Residents and National Forests: 2000.
[29] www.fs.fed.us/forestmanagement/aboutus/histperspective.shtml

furnish a continuous supply of timber for the use and necessities of citizens of the United States…"[30]

"Several national forests were created under the Weeks Law of 1911 to restore forests on formerly private lands that had been heavily logged or cleared for agriculture. That law authorized the Secretary of Agriculture to "…examine, locate, and purchase such forested, cutover, or denuded lands within the watersheds of navigable streams as in his judgment may be necessary to the regulation of the flow of navigable streams or for the production of timber." Many of today's Eastern national forests were acquired under the Weeks Law. Their improved conditions are largely due to past reforestation efforts by the Forest Service and partners such as the Civilian Conservation Corps.[31]

"Until World War II, the Forest Service primarily focused on watershed protection, forest restoration, and wildfire prevention and suppression. Since there were abundant supplies of private timber, very little national forest logging occurred during this period.[32]

"During the post-World War II housing boom, national forests were viewed as a ready supply of building material. The increased demand for timber from national forests led to more widespread use of commodity-oriented harvesting techniques such clearcutting. Along with the increased logging that followed, concern over the environment increased. In the 1960's and 1970's, several laws were enacted to protect forests. Additional laws formalized the concept of "multiple-use," whereby the uses of timber, forage, and water shared equal footing with wildlife conservation and recreation opportunities. Timber sales on national forests increased to the 12 billion board foot mark during this period. At the same time, the United States began importing more wood to help meet increasing demand. To this day, the country continues to import more wood than it exports.[33]

"In the 1970's, concerns about environmental impacts and conflicting uses escalated, leading to increased lawsuits and additional environmental protection measures. As a result, the Forest Service now operates federal timber sales under some

[30] Ibid.
[31] Ibid.
[32] Ibid.
[33] Ibid.

of the most substantial and effective environmental protection policies in the world. In response to the public controversy and a greater understanding of how management actions influence the landscape, today's timber sale levels have dropped by two thirds (back to the pre-1950 levels), even though timber demand continues to increase at a rate of about one percent annually. In addition, clearcut harvests have been reduced by 80 percent over the last decade.[34]

"Approximately 73 percent of the 191 million acres of national forests are considered forested. Of that forested land, 35 percent is available for regularly scheduled timber harvest and about ½ of 1 percent of those trees are harvested in any one year. The remaining 65 percent of the forested land is designated for non-timber uses, such as wilderness and other areas set aside for recreation, or cannot be harvested due to environmental conditions, such as steep slopes and fragile soils."[35]

3.1.2 Industry trends

Forest industries employ approximately 70,000 people statewide and generate approximately $1 billion in payroll.[36] The wood products companies in Ohio can be divided into primary and secondary establishments. Primary companies include sawmills, pulp mills, veneer plants and logging contractors. Secondary industries use wood products to produce furniture, pallets and paper products. In addition, other companies market forest products such as firewood, maple syrup, and Christmas trees. The wood product industry generates approximately $7 billion for Ohio's economy. The Ohio Chapter of the Society of American Foresters reports the statewide revenue as $9 billion.[37]

A study of Ohio's Gross State Product, 1991 to 2000, shows that wood and wood-product industries are growing in Ohio.[38] In constant (1996) dollars, Ohio's lumber and wood products increased from $1,184,000 in 1991 to $1,583,000 in 2000, a 33.7 percent

---

[34] Ibid.
[35] Ibid.
[36] Ohio Department of Natural Resources, Division of Forestry, www.dnr.state.oh.us/forestry/industries/industries1.htm, accessed 10/1/03.
[37] Romig, Robert. "Ohio's Hardwood Industry." Society of American Foresters, www.ohiosaf.org/hardwood.htm, accessed 9/25/03.

increase. The economic value of Ohio's production of furniture and fixtures grew from $646 million in 1991 to $979 million in 2000, an increase of 51.5 percent. Only paper and allied products saw a decline, from $2,203 million in 1999 to $2,029 million in 2000, a decrease of 11 percent.

The Ohio Chapter of the Society of American Foresters offers the following analysis of the state's hardwood industry:[39]

> The forest products industry is unique from other industries in that the raw material is valued as both an aesthetic and natural resource, in addition to its obvious use in the manufacture of wood based products. Annual per capita consumption of solid wood in the U.S. is the equivalent of 250 board feet. Stakeholders as diverse as the forest ecosystem influence raw material availability for the industry. In fact, it is well documented that residents in Cleveland, for example, have a stake in the forests of southern Ohio. Timber harvesting occurs throughout the state and is therefore subject to the scrutiny of all citizens. Since the industry is subject to environmental regulations and public pressures associated with resource consumption, firms often strive for a "low profile" with the public sector.
>
> Demand for hardwood lumber is generally created by the worldwide furniture markets. Ohio timber is representative of the highest quality Appalachian hardwoods, based on wholesale lumber prices. Cherry is currently the highest value domestic hardwood replacing the long time leader, black walnut. The majority of the timber sold in Ohio originates from non-industrial private land. In the most recent forest survey conducted in 1991 by the Forest Service, the non-industrial private landowner controls nearly 80 percent of the timberland acreage in Ohio.
>
> Generally speaking, the unglaciated region of Ohio contains the greatest concentration of forest resources. Sawmills and pulp mills are

---

[38] Ohio Department of Development, Office of Strategic Research. "Ten-year Time Series by Industry."
[39] Romig, Robert L., Ohio's Hardwood Industry, www.ohiosaf.org/hardwood.htm, accessed September 2003

located near the raw material, while the secondary manufacturing firms are concentrated near the markets in metropolitan areas.

Hardwood lumber is used in a variety of products related to home construction and industrial production. Typically, the higher grade lumber is used in furniture and home construction for molding and millwork, while the lower grade material is converted into containers and pallets used by industrial firms.

One of the largest single consumers of pallets and container products is the food industry. Material handling services are extremely important in the food industry because production, distribution and consumption are geographically separate. It is estimated that fifteen percent of the total pallet production in 1989 was consumed by the grocery industry. Based on the number of pallet firms, Ohio is one of the top three states in the U.S. due to its proximity to both the food industry in the upper Midwest and the wood raw material consumed in pallet production. It has been reported that the pallet and container industry accounted for 40 to 60 percent of the total U.S. hardwood lumber consumption over the last decade.

The pallet industry plays an important role in utilizing the lower grade hardwood lumber and the less desirable species such as the pin, scarlet and swamp white oaks. Hardwood lumber grades are based on the percentage of clear wood, free of defects such as knots, worm holes and rot, found in each board. Low grade lumber is produced in even the highest grade log. As the lumber is sawed near the center of the tree, a higher percentage of the boards contain knots and other defects. Even the highest quality oak and cherry logs will have a 25 percent to 30 percent of their lumber yield below average grade. Lower grade material becomes raw material for the hardwood flooring and pallet industries.

In Ohio, the forest products industry is a value-added industry represented by manufacturing sectors in wood and wood products, furniture and paper. The primary manufacturing firms such as sawmills,

pulp mills, veneer plants and logging contractors add value to the round wood. Secondary manufacturing firms add value to the lumber, composite wood products and pulp to produce cabinets, furniture, pallets and paper products. Additional products include maple syrup, Christmas trees, and firewood and specialty forest products. Overall, the industry generates products valued at $9 billion while employing more than 70,000 people with a payroll exceeding $1 billion. Although Ohio is not considered to be a "timber state," it is clearly recognized as a value-added state for forest wood products manufacturing. Ohio's forest industry is concentrated in the value-added secondary-manufacturing firms.

Small business is an integral part of the economic and competitive base of most communities. The wood products industry in Ohio represents over eight percent of all manufacturing firms in the state. Furthermore, these firms are clearly examples of small business, since more than 70 percent have fewer than 20 employees. The combination of small business and wood resource utilization represents a symbiotic relationship with economic development potential in rural areas of Ohio. However, these firms are subject to the usual pressures associated with industries dependent on natural resource use.

Ohio is a net importer of raw material for the sawmill industry. Based on the most recent survey (1989), 28 percent of the logs originated from outside the state. Current consensus among most mill owners and natural resource professionals is that the number of logs imported into Ohio now exceeds 50 percent. Until recently, logs from surrounding states have been readily available. However, these neighboring states have initiated programs to promote the development of in-state firms to add value to the raw material. The result has been an increase in wood products manufacturing firms processing raw materials harvested in these traditional log-exporting states. The implications for Ohio wood products firms are uncertain at best, but could include price increases, reduced raw material availability, plant closures and lost jobs.

The availability and cost of wood as a raw material is an important issue facing forest product manufacturers. One indication of decreasing hardwood availability is recent log and lumber price increases. Harvest restrictions and increased demand for U.S. hardwoods in both domestic and foreign markets are contributing factors affecting the hardwood resource availability. The forest products industry has responded with the adoption of new processing technology, such as techniques that increase lumber yield from the raw material while reducing residue. One example is the use of thin-bladed saws. Challenges facing the industry in the future include the adoption of further innovations aimed at efficiently processing the raw material and extending the forest resources.

Research for this Social Assessment failed to uncover accurate statistics at the county level for either employment or earnings by the timber or wood products industry. The best source of county-by-county information available is the Forest Statistics series produced by the Northeastern Station of the U.S. Forest Service; however, this series reports primarily timber volume, growth and removals. Because of the fluctuations in timber values and markets, there is no accurate way to extrapolate economic impact from growth or harvest statistics. The statistical summaries that are available show that information is missing for many counties within the forest area, in some cases because it is not reported for proprietary reasons. Consequently, the best available data come from the U.S. Census Bureau statistics for Agricultural Services, which includes Forestry, Fishing and Hunting. Table 23 shows the historic and projected employment for this individual sector, as reported by the U.S. Census Bureau.

Table 23 – Historic and Projected Employment in the Agricultural Services Sector

Location	1970	2000	2020	Net Change (1970-2000)	% Change (1970-2000)	Net Change (2000-2020)	% Change (2000-2020)
Athens	100	210	310	110	110%	100	48%
Gallia	40	160	200	120	300%	40	25%
Hocking	30	70	90	40	133%	20	29%
Jackson	50	100	160	50	100%	60	60%
Lawrence	20	140	180	120	600%	40	29%
Monroe	10	50	60	40	400%	10	20%
Morgan	40	50	60	10	25%	10	20%
Noble	40	40	50	0	0%	10	25%
Perry	40	90	130	50	125%	40	44%
Scioto	100	280	370	180	180%	90	32%
Vinton	10	30	40	20	20%	10	33%
Washington	100	350	460	250	250%	110	31%
Forest-wide total	580	1,570	2,110	990	171%	540	34%
State	17,210	60,120	80,800	42,910	249%	20,680	34%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

These employment statistics show relatively few people work in the Agricultural Services sector in the 12 counties. Eleven of the 12 counties observed employment growth in this sector between 1970 and 2000. The region's employment growth rate in this sector fell well below the state's growth rate for the same period.

The relative significance of employment in this sector for the 12 counties is depicted in Table 24, which shows that Agricultural Services represented less than 1 percent of total employment in 10 of the 12 counties in the year 2000. The highest proportions were in Washington and Gallia Counties, where Agricultural Services comprised 1% of the county's total employment. Because this statistic includes jobs other than forestry, this level of reporting suggests that the timber industry is not a significant source of employment within the 12 counties. However, the full level of employment may not be reflected in the statistics for proprietary reasons, as noted above.

Table 24 – Agricultural Services, Forestry, Fishing, and Other Employment as a Percent of Total Employment (2000)

	Agricultural Services, Forestry, Fisheries, and Other Employment		Total for all Economic Sectors		Agricultural Services Sector as a Percent of the Total for all Economic Sectors	
Location	**Jobs**	**Wages (1996 $ in millions)**	**Jobs**	**Wages (1996 $ in millions)**	**Jobs**	**Wages (1996 $ in millions)**
Athens	210	$2.48	27,760	$661.94	0.8%	0.4%
Gallia	160	$1.49	16,340	$389.19	1%	0.4%
Hocking	70	$2.46	10,300	$228.19	0.7%	1%
Jackson	100	$0.97	15,270	$352.94	0.7%	0.3%
Lawrence	140	$1.46	19,220	$392.54	0.7%	0.4%
Monroe	50	$0.44	7,470	$189.10	0.7%	0.2%
Morgan	50	$0.79	5,670	$135.55	0.9%	0.6%
Noble	40	$0.25	5,300	$105.57	0.8%	0.2%
Perry	90	$0.76	11,040	$227.54	0.8%	0.3%
Scioto	280	$4.29	33,220	$778.81	0.8%	0.6%
Vinton	30	$1.00	3,570	$74.60	0.8%	1%
Washington	350	$6.47	33,740	$837.38	1%	0.8%
Forest-wide total	1,570	$22.86	188,900	$4,373.35	0.8%	0.5%
State	60,120	$1,015.31	6,880,900	$212,522.13	0.9%	0.5%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

As shown in Table 25, only three of the 12 counties within the Forest saw a decrease in earnings related to Agricultural Services between 1970 and 2000. The other nine counties enjoyed wages in this sector that increased by at least 37 percent. In seven counties, Agricultural Services represented more than $1 million in earnings in 2000. Again, it should be noted that the Agricultural Sector includes employment not directly related to the timber industry. Conversely, manufacturing and other secondary jobs in the wood-products industry, such as paper mills, are not included in these statistics.

Table 25 – Historic and Projected Earnings in the Agricultural Services Sector (1996 $ in millions)

Location	1970	2000	2020	Net Change (1970-2000)	% Change (1970-2000)	Net Change (2000-2020)	% Change (2000-2020)
Athens	$1.33	$2.48	$4.30	$1.15	86%	$1.82	73%
Gallia	$0.40	$1.49	$2.23	$1.09	272%	$0.74	50%
Hocking	$0.45	$2.46	$3.73	$2.01	447%	$1.27	52%
Jackson	$0.71	$0.97	$1.96	$0.26	37%	$0.99	102%
Lawrence	$0.34	$1.46	$2.18	$1.12	329%	$0.72	49%
Monroe	$0.15	$0.44	$0.63	$0.29	193%	$0.19	43%
Morgan	$0.92	$0.79	$1.05	($0.13)	-14%	$0.26	33%
Noble	$0.51	$0.25	$0.38	($0.26)	-51%	$0.13	52%
Perry	$0.77	$0.76	$1.26	($0.01)	-1%	$0.5	66%
Scioto	$1.70	$4.29	$6.78	$2.59	152%	$2.49	58%
Vinton	$0.25	$1.00	$1.45	$0.75	300%	$0.45	45%
Washington	$1.34	$6.47	$10.35	$5.13	383%	$3.88	60%
Forest-wide total	$8.87	$22.86	$36.30	$13.99	158%	$13.44	59%
State	$350.29	$1,015.31	$1,618.36	$665.02	190%	$603.05	59%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

Specific forecasts for employment in the timber industry for Ohio counties are not available. However, the U.S. Department of Labor's Occupational Outlook Handbook indicates that overall employment in the forestry sector is expected to decline through the remainder of this decade[40]:

> Despite steady demand for lumber and other wood products, employment of timber cutting and logging occupations is expected to decline Forest conservation efforts may restrict the volume of public timber available for harvesting, particularly in Federal forests in the West and Northwest, dampening demand for timber cutting and logging workers. The best job opportunities will be with privately owned forests and tree farms, which are not subject to the same restrictions in timber harvesting as forests on Federal land. Domestic timber producers also face increasing competition from foreign producers who can harvest the same amount of timber at lower costs. As competition increases, the logging industry is expected to continue to consolidate in order to reduce costs, eliminating some jobs.

3.1.3 National Forest Timber Harvest from an Ecological Perspective[41]

While timber and other wood products provide important economic benefits, the overriding objective of the Forest Service timber program is to ensure that national forests are managed in an ecologically sustainable manner. For centuries before Europeans settled America, people have used forest resources and influenced the ecological condition of forests through their actions. Along with growing populations and a more affluent society, human influences on forests have increased. This presents a significant challenge for the Forest Service to provide forest resources and experiences within the overriding objective of sustaining ecological integrity. Along with harvesting

[40] U.S. Department of Labor, "Occupational Outlook Handbook" p. 432-433.
[41] www.fs.fed.us/forestmanagement/aboutus/histperspective.shtml

national forest timber on a sustainable basis, timber sales provide an economic means of managing vegetation.

There are critical environmental reasons to retain timber harvest as a component of national forest management. For example, timber harvest is essential to ongoing recovery efforts for the red-cockaded woodpecker, an endangered species that lives in mature pine forests of the South. When hardwood trees grow under the larger pines and reach the level where the birds have made their nest cavities, conditions for foraging and access to the cavities become unsuitable. These conditions, if left unchecked, will often stop the woodpeckers from using the cavities, and whole colonies of birds can be lost. Timber sales are being designed to remove the mid-story vegetation without disturbing the colonies, thereby maintaining suitable woodpecker habitat. Restoration efforts have been further aided by using timber sales in the same way to expand the amount of suitable habitat, which encourages the establishment of new woodpecker colonies.

In most cases, forest ecosystems are in a healthy, functioning condition due to both past active management and environmental protection measures. These forests provide highly diverse and often unique resources, opportunities, and experiences for the American public. In some cases, ecosystems are not functioning in a way that can be sustained without unacceptable risk of losses to wildfire, insects, or diseases. In particular, the long-term exclusion of fire from ecosystems dependent on frequent low-intensity fires, such as Western ponderosa pine ecosystems, has left those sites vulnerable to high-intensity crown fires. The Forest Service is actively managing many of these forests to help restore more acceptable ecological conditions by thinning out the overcrowded fire intolerant tree species and working to restore the low-intensity fire patterns. Sometimes, the thinned trees can be sold to help offset the cost of the restoration project. The Forest Service is closely monitoring these programs to determine the extent of their contribution to the restoration of healthy forests.

It is important that the agency assesses ecological situations at the local and landscape levels, establishes management objectives based on ecological, social, and economic information, and utilize the best tools available to achieve the established vegetation objectives. In all cases, the agency's overriding objective is to sustain the long-term health of the land. Timber sales, as well as other vegetation management tools

such as management-ignited fire or prescribed natural fire, play an important role in this process. Restoration and maintenance of healthy forests is the best way to sustain the health, diversity, and productivity of the land.

3.2 Subsurface Resources

Management of the mineral estate under the Wayne is heavily impacted by the prior history of the lands that are now within the National Forest. As noted earlier in this document, the federal government sold or gave away the land in the region between 1787 and 1866. While in private ownership, the subsurface rights were severed from a significant percentage of surface acreage. Subsurface rights provide owners with access to a host of minerals, including coal, oil, natural gas and others. Owners may exercise their right to remove minerals regardless of who owns the surface rights, including the federal government.

As the Forest Service began to acquire land for the Wayne National Forest in 1935, the agency acquired only subsurface rights as they were offered with surface acreage. Only recently has the Wayne been offered significant amounts of subsurface rights below existing National Forest lands. Consequently, the federal government owns mineral rights beneath only about 40 percent of the Wayne National Forest. This situation limits the impact of the Land and Resource Management Plan to fully guide the development of minerals on National Forest lands.

Across Ohio, coal, minerals, oil and gas have been produced in considerable quantities.[42] In 2001 coal production totaled 25.8 million tons from 111 active mines in 21 counties, an increase of 14.7 percent from 2000. This production came in nearly equal measure from 102 surface coal mines (12.5 million tons) and 10 underground mines (13.3 million tons). The total value of coal was $616.9 million.

During 2001 mineral production totaled 147.2 million tons from 731 mining operations, an increase of 0.6 percent from 2000. The vast majority of this production (82 percent) was in limestone, dolomite, sand and gravel. Other minerals produced

[42] Division of Mineral Resources Management, 2002 Annual Report and 2002 Summary of Oil and Gas Activities, http://www.ohiodnr.com/mineral/.

included salt, sandstone, clay, shale, gypsum and peat. In economic terms, mineral production was valued at $ 802.2 million.

Ohio wells produced 6.0 million barrels of crude oil in 2002, a 0.75 percent decrease from 2001. Ohio natural gas production in 2002 was 97.1 million cubic feet, a 1.1 percent increase from 2001. A total of 498 oil and gas wells were drilled in 2002, across 40 counties. This represents a decrease of 191 wells (28 %) from 2000. Three of the 12 counties within the Wayne National Forest ranked among the 10 most active Ohio counties for oil and gas drilling for 2001 (Lawrence, Monroe, and Noble).

Market values of Ohio oil and gas produced in 2002 were estimated to be $135.1 million for crude oil, a 2.3 percent increase from 2001, and $331.3 million for natural gas, a 25.0 percent decrease from 2001. These figures reflect quantity sold as well as prices. Crude oil gas prices were up 3.0 percent from 2001, while natural gas prices were down 24.1 percent.

Table 26 shows the historic and projected employment trends in mining from 1970 to 2020 for the 12 counties within the Wayne[43]. Of the twelve counties in the region, eight saw declines in employment levels from 1970 to 2000, reflecting a statewide decline in employment in the mining industry. However, modest job gains are expected in the future.

[43] Iowa State University, Department of Economics: Public Resources Online, Ohio PROfiles oh.profiles.iastate.edu/bea/bycounty.aspx?Table+CA25&Title+200

Table 26 – Historic and Projected Employment in Ohio Mining

Location	1970	2000	2020	Net Change (1970-2000)	% Change (1970-2000)	Net Change (2000-2020)	% Change (2000-2020)
Athens	130	110	140	(20)	-15.4%	30	27.3%
Gallia	190	40	40	(150)	-78.9%	0	0.0%
Hocking	130	200	260	70	53.8%	60	30.0%
Jackson	250	420	550	170	68.0%	130	31.0%
Lawrence	140	40	40	(100)	-71.4%	0	0.0%
Monroe	260	610	830	350	134.6%	220	36.1%
Morgan	660	350	460	(310)	-47.0%	110	31.4%
Noble	340	160	210	(180)	-53.0%	50	31.3%
Perry	850	510	660	(340)	-40.0%	150	29.4%
Scioto	60	20	20	(40)	-66.7%	0	0.0%
Vinton	80	40	50	(40)	-50.0%	10	25.0%
Washington	480	920	1,060	440	91.7%	140	15.2%
Forest-wide total	3,570	3,420	4,320	(150)	-4.2%	900	26.3%
State	24,710	22,270	26,810	(2,440)	-9.9%	4,540	20.4%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

Declines in mineral industry employment have been mirrored by declines in earnings. Forest-wide, industry earnings declined from a constant-dollar value of $109.83 million in 1970 to $95.76 million in 2000, a decline of 12.8 %. Statewide, the decline was just 4.2 %. From 2000 to 2020 however, the state and forest-wide trend indicates growth for the mining industry overall. Earnings are expected to increase by 35.8% in the region and 26.6% statewide. Statistics are not available to indicate whether the growth will be in the coal, oil and gas, or other mining sector.

Table 27 – Historic and Projected Earnings in the Mining Sector (1996 $ in millions)

Location	1970	2000	2020	Net Change (1970-2000)	% Change (1970-2000)	Net Change (2000-2020)	% Change (2000-2020)
Athens	$2.16	$0.83	$1.13	($1.33)	-61.6%	$0.30	36.1%
Gallia	$10.00	$0.35	$0.40	($9.65)	-97.0%	$0.05	14.2%
Hocking	$2.05	$2.51	$3.41	$0.46	22.4%	$0.90	35.9%
Jackson	$8.44	$20.81	$28.42	$12.37	146.6%	$7.61	36.6%
Lawrence	$5.62	$1.53	$1.74	($4.09)	-72.8%	$0.21	13.7%
Monroe	$0.90	$19.52	$28.21	$18.62	2068.9%	$8.69	44.5%
Morgan	$26.26	$20.01	$27.21	($6.25)	-23.8%	$7.2	36.0%
Noble	$13.54	$5.66	$7.65	($7.88)	-58.2%	$2.0	35.2%
Perry	$32.39	$11.97	$16.20	($20.42)	-63.0%	$4.23	35.3%
Scioto	$2.70	$0.65	$0.68	($2.05)	-75.9%	$0.03	4.6%
Vinton	$2.37	$2.04	$2.77	($0.33)	-13.9%	$0.73	35.8%
Washington	$3.40	$9.88	$12.18	$6.48	190.6%	$2.3	23.3%
Forest-wide total	$109.83	$95.76	$130	($14.07)	-12.8%	$34.24	35.8%
State	$913.51	$874.72	$1,107.69	($38.79)	-4.2%	$232.97	26.6%

Source: Woods and Poole Economics. 2002 State Profile: State and County Projections to 2025. 2002. pgs. 72, 142, 186, 206, 212, 220, 244, 248, 254, 260, 278, 296, and 300.

As with the timber industry, the available statistics do not permit a full assessment of the mining industry in the 12 counties of the Wayne. One of the problems is that data sets are incomplete due to non-reporting of proprietary information. Another obstacle is the lack of information specific to individual townships or communities in which the National Forest is located. While overall trends might indicate a historic decline in the mining industry of Southeast Ohio, certain sectors within the industry, such as oil and gas activity in Lawrence, Monroe and Noble Counties, are experiencing an increase in activity.

3.3 Recreation and Tourism

As recreational uses of public lands have increased, there has been growing interest in the economic contributions of recreation and tourism in regions with national forests. Throughout the public comment period following publication of the Notice of Intent to update the Wayne National Forest Plan, the subject of recreation was discussed extensively. One of the most common themes of this public comment was that recreation development posed a viable alternative for economic development in the counties with National Forest lands, compared to timber harvesting, oil and gas production and similar "consumptive" uses of the National Forest. One commenter observed:

> *As the population in Southern Ohio and adjoining areas continues to rise, and as more recreational opportunities are made available in areas that have increasing aesthetic beauty and biological integrity, there is no reason not to believe that the economic figures . . . will continue to rise and that local communities will receive significant benefit from the non-commodity resources available from the Wayne National Forest. (Comment 330)*

However, the Wayne also received a number of comments expressing the concern that recreation alone could not support the region's economy or that recreation would not

provide the requisite level of income to improve the area's standard of living. A typical comment stated:

> *In no county or community where restrictions such as being proposed by Sierra Club have been instituted has tourism come close to offsetting the devastating economic loss to the counties and communities (Comment 367)*

In general, the public supports the notion that recreation is an appropriate activity on National Forests. In one survey, 91 percent of respondents rated as extremely important, very important or somewhat important that National Forests provided "a place to go for fishing, boating and other outdoor recreation activities."[44] The economic impacts of such activities are discussed below.

3.3.1 Nonlocal and Local Visitor Expenditures

Recreation and tourism industries are a growing economic force in Southeast Ohio, and this growth is linked to public lands such as the Wayne National Forest. According to a 1996 survey by Ohio's Department of Development, 52 percent of visitors to the region came to visit a National Forest, a state park or participate in an activity available on the National Forest, including boating, hunting, fishing, hiking, biking, visiting historic sites or auto/bus tours.[45] These visitors contribute economically to the region when they visit.

In 1996, Dr. Warren Kriesel, an associate professor in the Department of Agricultural and Applied Economics at the University of Georgia, conducted a study of the economic impact of the outdoor recreation in the Wayne National Forest.[46] Dr. Kriesel observes: "Visitors who live outside of the local economy surrounding the Wayne NF come to the forest to engage in outdoor recreation. While visiting the site and

[44] Kearns and West. 2000. "Urban Connections: Boston, Detroit, and Minneapolis Residents and National Forests."
[45] Ohio Department of Development, Domestic Leisure Travel in Ohio, 1994-1996.

traveling within the local area, these visitors spend money on food, lodging, gasoline and general supplies." The study found:

During the year ending April 1996, approximately 689,000 people visited the WNF, of which approximately 384,000 were nonlocal visitors who brought "new" dollars into the region. The estimate of visitation was extrapolated from field observation of visitors made by Forest employees. Factors such as day of the week and home county on license plate were used to make the extrapolation as accurate as possible.

Nonlocal visitors spent approximately $31,810,000 in the communities around the WNF. This is based on an average daily expenditure of $82.84 per person, derived from information about visitors to neighboring national forests. This figure appears to be in line with other estimates of visitor spending. The Ohio Division of Travel and Tourism indicates daily expenses are more than $74 per day[47]. The president of the Marietta Area Chamber of Commerce used the estimate of $70 to $160 per day per visitor.[48]

Recreation-related spending supported 1,024 jobs and generated $24,971,000 in annual income to residents in southeast Ohio. Although it is possible to directly link certain jobs with the Wayne (for example, campground caretakers at Leith Run in Marietta and Lake Vesuvius in Ironton), recreation on the Wayne primarily supports existing jobs in such service areas as restaurants, lodging, outdoor stores, ORV dealers, equine outfitters, etc.

It is worth noting that Dr. Kriesel did not explore the added benefit of local visitors. By visiting the Wayne, their dollars remain in Southeast Ohio. If the 305,000 local visitors spent $45.50 – the average amount spent by individuals on one-day outings according to the 1996 Department of Development study[49] -- on food, gasoline and general supplies, they represent an additional $13,877,500 contribution to the local economy.

---

[46] Kriesel, Warren. The Economic Impacts of Outdoor Recreation at the Wayne National Forest, Ohio. 1996. Attached as an Appendix.
[47] Ohio Division of Travel and Tourism, PowerPoint Presentation, Ohio University Inn, Athens, Ohio: June 2000.
[48] Fair, Kate. Weekend events boost economy. The Marietta Times. May 19, 2000.
[49] According to the Department of Development 1996 Study, 66 percent of respondents spent between $11 and $80 during a day trip, for an average expenditure of $45.50.

3.3.2 Hunting

According to a nationwide survey conducted by the U.S. Fish and Wildlife Service[50], hunters spend $515 million annually in Ohio on hunting-related expenditures, including food, gasoline, clothing and hunting equipment and supplies. The Ohio Division of Wildlife estimates that deer hunting accounts for nearly 40 percent of all hunting expenditures in Ohio, or about $200 million annually[51]. Turkey hunting also represents a sizable share of such expenditures in the state.

In 2001, the last year for which figures are available, vendors in the 12 counties within the Wayne sold 38 percent of the annual nonresident hunting licenses in the state. In 2002 and 2003, over 25 percent of the turkey and deer harvested statewide by hunters occurred in the Wayne National Forest region (see Table 27).

[50] National Survey of Fishing, Hunting and Wildlife-Associated Recreation, 1996. www.census.gov/prod/www/abs/fishing.html]
[51] Wises, John. Ohio hunters invest $515 Million, Ohio Department of Natural Resources, 11-3-97.

Table 27 – Hunting Season Total within the Wayne National Forest Region

Season	WNF County Total	Percent of Ohio Total
Fall Turkey (2002)	666	31%
Spring Turkey (2003)	5,370	26%
Deer (all seasons/weapons – 2002-2003)	54,046	27%

Sources: Ohio Department of Natural Resources (ODNR), Division of Wildlife. Ohio's Fall Turkey Harvest Down from 2001. Available at http://www.ohiodnr.com/news/oct02/1028turkeys.htm Website accessed on 9/29/03. ODNR, Division of Wildlife. Spring 2003 Turkey Hunting Results. Available at http://www.ohiodnr.com/wildlife/PDF/pub5.pdf Website accessed on 9/29/03 and ODNR, Division of Wildlife. Summary of 2002-03 Ohio Deer Seasons. Available at http://www.ohiodnr.com/wildlife/PDF/pub304.pdf Website accessed on 9/29/03.

Because hunters are not required to indicate precisely where in a county an animal was taken, it is difficult to determine the exact percentage of each harvest taken on National Forest lands. Reasonable estimates are equally difficult to make because the amount of National Forest lands varies among the 12 counties, from less than 700 acres in Noble County to more than 68,000 acres in Lawrence County. Additionally, counties vary in the amount of non-Forest Service public land available for hunting. For example, the holdings of Shawnee State Forest are five times greater than the holdings of the Wayne in Scioto County; on the other hand, there is little public hunting land in Washington County other than National Forest lands. Washington County is consistently reported among the counties with the highest number of deer checked in each season.

As a conservative estimate, if just 25 percent of all deer hunting within these 12 counties occurs on National Forest lands, the Wayne helps generate approximately $17 million for Ohio's economy, based on the ODNR estimate of $200 million spent by deer hunters statewide.[52]

3.3.3 Boating, Fishing, Trail Riding, and Gathering Special Forest Products

All of the recreation opportunities available on the Wayne National Forest represent opportunities for economic benefits in the surrounding communities. Boating and fishing are popular at Lake Vesuvius and Timbre Ridge on the Ironton District. Commercial vendors sell all boats, rigging, bait and tackle. A summary of the county impact of tourism in Lawrence County, where the Wayne's Lake Vesuvius Recreation Area and Off-Road Vehicle trails are among the county's most popular attractions, completed by MarketVision Research, Inc., shows that tourism provided $18.76 million to the county's economy and helped to create more than 600 jobs.[53]

Riding of mountain bikes, horses and off-road vehicles (ORVs) is permitted on designated trails with the purchase of a daily or annual permit. All three sports require significant capital investments made through private vendors. Prices for ORVs range

[52] Wisse, John. Ohio hunters invest $515 Million, Ohio Department of Natural Resources, 11-3-97.

from $4,000 to $8,000. ORVs are subject to state sales tax and state registration fees. In 2001, the Wayne sold ORV permits to over 14,000 riders (see Table 28). When purchased, 14,000 ORVs would represent between $56 million and $112 million, which translates into $3.4 million to $6.8 million in state and local sales taxes (at a 6 percent tax rate).

[53] MarketVision Research Inc., Summary of County Impact: Lawrence County, Ohio. 1997.

Table 28 -- Trail permits sold on the Wayne National Forest

Year	Total	ORV	% ORV	Mountain Bike	% Mountain Bike	Horse	% Horse
2001	14,680	14,247	97.05%	126	0.86%	307	2.09%
2002*	8,311	8,139	97.93%	114	1.37%	58	0.70%

* 2002 figures are partial season from April 15 to November

Combining ORV permits with horse and bike permits totals 14,680 permits sold in 2001. The vast majority of all permits, 14,247, were for ORV use (97 percent of all permits). Mountain bikers bought the smallest number of permits, 126, representing 0.86 percent of all permits in 2001. A total of 307 horse trail permits were purchased in 2001.

Individuals who acquire the appropriate permits may also gather firewood or plants on National Forest lands. Ohioans purchased permits to gather more than $12,562 worth of firewood in calendar year 1998. That year collectors reported gathering more than $23,810 worth of plants, including ginseng, cohash, bloodroot and yellowroot.

Section 4: Recreational Opportunities on the Wayne National Forest

The role of the Wayne National Forest in providing opportunities across a spectrum of recreational activities has been, and will continue to be, important. To help assess the current and potential recreation opportunity situation on the Wayne, the Forest Service commissioned a Recreation Feasibility Study that was completed in 2002 by the Strategic Research Group.[54] That report summarized the role of Wayne's recreation mission:

The U.S. Department of Agriculture Forest Service's mission is to manage public lands in National Forests and grasslands. When created in 1905 its primary function was

[54] Strategic Research Group. Wayne National Forest Recreation Feasibility Report, 2002. Columbus, Ohio.

to provide quality water and timber for the nation. Since 1905, however, the focus of the National Forest Service (NFS) has expanded to include maintaining the natural heritage and expanding outdoor recreational opportunities. In carrying out these expanded responsibilities, the Forest Service has named five key areas.[55]

1. Improve the settings for outdoor recreation;
2. Improve visitor satisfaction with facilities and services;
3. Improve educational opportunities for the public about the values of conservation, land stewardship, and responsible recreation;
4. Strengthen the relationship with private entities and volunteer-based and nonprofit organizations; and
5. Establish professionally managed partnerships and intergovernmental cooperative efforts.

These principles are meant to be applied to each National Forest to plan future recreation strategies. In its efforts to expand its outdoor recreational opportunities, the Wayne National Forest commissioned this study to identify potential recreational opportunities and the strategies needed to implement them in order to better serve outdoor recreation users and surrounding communities.

The Feasibility Study provides insight into the popularity of different outdoor recreation activities, as well as opportunities for increasing opportunities for such activities. In addition, it examines the role of outdoor recreation in economic development.

4.1 Popularity of Different Outdoor Recreation Activities in the State, Region, and Nation

This section will summarize the relevant information available from the Strategic Research Group report and other sources to assess current and potential recreational opportunities on the Wayne National Forest. Recreational information is aggregated

[55] United States Department of Agriculture: Forest Service. 2002. "The Recreation Agenda." Internet Website: www.fs.fed.us.

across three different levels: Ohio[56], Midwest / North Central Region[57], and the United States. [58]

There was remarkable consistency across aggregate populations for recreational activities. Table 29 provides the percentage of the population that participates in each recreational activity by geographical stratum. One must use caution when comparing percentages across surveys because of differences in wording on the survey instrument and respondent interpretation. For example, in Ohio the area recreation users were asked, "Have you used an off-highway recreational vehicle?" whereas in the national and regional survey the similar question asked, "Did you drive off-road for recreation using a 4-wheel drive, ATV, or motorcycle?"

[56] Strategic Research Group report.
[57] Cordell, H. Ken. 2002. "Emerging Markets for Outdoor Recreation in the United States." Internet Website: www.srs.fs.fed.us. Cordell, H. Ken et al. 2001. "Footprints on the Land: An Assessment of Demographic Trends and the Future of Natural Lands in the United States." Sagamore Publishing. Urbana, IL.
[58] United States Department of Agriculture Forest Service. 2002. "National Survey of Recreation and the Environment." Internet Website: www.srs.fs.fed.us/trends/NSRE. Roper/Starch Worldwide Inc. 2000. "Outdoor Recreation in America: Addressing Key Societal Concerns." Internet Website: www.funoutdoors.com/research/statistics. Also referred to as "Recreation Roundtable" survey data.

Table 29 -- Comparing Local, State, Regional, and National Outdoor Recreational Activities by Percentage of Population

Activity	Area Recreation Users	Regional Midwest	National (NSRE 2000)	National Recreation Roundtable 2000
Nature/ Sightseeing	79	NA	NA	NA
Hike/Nature Walk	70	68.2	33.2/ 83.1	57
Picnic	64	52.2	54.7	36
Swim/ Beach	59	53.4	60.7	39
Historical Site	53	43.9	46.3	16d
Jogging	42	23.9	NA	18
Lodge	36	NA	NA	NA
Boat	35	31.8	36.4	9
Fish	33	31.5	34.2	26
Tent	27	21.7a	26.2a	17
Tour Bike	24	31.4b	39.7c	NA
Off Road Vehicle	18	12.6	17.5	7
Recreational Vehicle	14	NA	NA	9
Mountain Bike	13	NA	21.5	5
Hunt/Trap	12	11.3	11.4	8
Shooting	12	NA	NA	NA
Horseback Riding	10	6.8	9.8	5
Backpack	9	5.4	10.7	9
Rock Climbing	5	3.3	NA	4

[a] Numbers in the tent category for regional and national data refer to developed camping, which may include campers in recreational vehicles.
[b] Numbers for tour biking regionally refer to all biking and may include mountain biking.
[c] Numbers for tour biking in national data refer to long distance biking.
[d] Numbers for historical sites in national data are actual numbers of visitors to cultural sites.

When focus is placed on outdoor recreation, the top five activities for Americans usually revolve around being low-impact, relaxing, and pleasurable, as well as having a positive scenic quality. In general, nature viewing, hiking, picnicking, beach activities, and visiting historic sites are the most often reported outdoor activities. Nature viewing includes bird watching, wildlife viewing, and visiting nature centers. Hiking and picnicking can also include nature viewing. In fact, many of these activities can be conducted during one outing or during one trip. Although there is some inconsistency between how the activities were measured, staying overnight (lodging and camping), boating, fishing, and trail using also have similarly high percentages of participants across surveys.

Although the ranking of activities may be similar across populations, it appears that people in the Midwest may be more interested in outdoor recreation than those in other regions in the U.S. The Midwest has the highest reported participation levels of all regions for outdoor recreational activities, including fishing, hunting, and boating.[59] This region also shows the highest levels in social activities, which include family gatherings, picnicking, and yard games. Indeed, Midwesterners are most likely to engage in outdoor recreation as a family.[60]

4.2 National Forest Opportunities to Increase Recreational Opportunities

How well do the recreational activities reported above match with the opportunities available on the Wayne National Forest? Currently the following types of recreational activities are offered on the Wayne: backpacking, bicycling, birding, boating, camping, canoeing, fall foliage, fishing, horseback riding, historical sites, hunting, mountain biking, nature viewing, ORV riding, picnicking, plant collecting, rock climbing, swimming, trapping, and wildlife watching. These activities typically attract high levels of interest among outdoor recreation users, and they match well the activities

[59] Cordell, H. Ken. 2002. "Emerging Markets for Outdoor Recreation in the United States." www.srs.fs.fed.us.

reported in the area recreation surveys described above. At the same time, the Recreation Feasibility Study identified stakeholders' views of types of recreational opportunities that they thought should be expanded. The most frequently cited opportunities were camping, fishing, hunting, and trails, including ORV, bike, horse, and hiking trails.

The Strategic Research Group study also identified important opportunities to increase recreational opportunities on the Forest. At present the Forest has a comparative advantage over other land owners in the region in providing trails for a variety of uses, particularly ORV riding; hunting; and wildlife viewing. The Forest could leverage these advantages to promote additional recreational opportunities, especially by adding more camping facilities near the Ironton and Marietta Units, and by publicizing tour directions and guides/outfitters to increase awareness of the full spectrum of recreational opportunities.

To encourage additional recreational use on the Forest, the Recreation Feasibility Study recommended targeting customer bases within a two-hour driving distance from WNF. However, since residents from West Virginia and Kentucky are less likely to visit WNF than are those in Ohio, an important target base is Ohio residents living within two hours of the forest.

Key challenges facing recreation strategies are as follows. First, the Forest has three separate physical units, preventing it from being promoted as a "one stop" recreation destination. Second, the Forest has a noncontiguous landmass, which makes it difficult for visitors to know whether they are on Forest or private land. Third, there is no easily definable entrance to the Forest, which makes it difficult for visitors to find recreational facilities. Fourth, there is currently relatively little public awareness of the Forest beyond the twelve counties in which it lies. Finally, the Recreation Feasibility Study found significant levels of animosity towards the Forest, stemming from staff turnover that complicates trust-building, complex funding and budgetary processes, and perceptions that the Forest negatively impacts local government tax bases.

[60] Roper/Starch Worldwide Inc. 2000. "Outdoor Recreation in America: Addressing Key Societal Concerns." www.funoutdoors.com/research/statistics. Also referred to as "Recreation Roundtable" survey data.

4.3 Outdoor Recreation and Area Economic Development

An important question is what impact outdoor recreation has on the economic development of an area. In non-urban counties in the United States, outdoor recreation generated 767,000 jobs in 1999.[61] Approximately 39% of these jobs were associated with food and beverage purchases, and the remainders were equally distributed across retail, trade, and recreation services.

Tourism employment has substantial drawbacks. Entry-level positions are often seasonal and produce income that is below average, especially for first time employees and for those in seasonal positions. High rates of turnover are common as well. Another disadvantage is that employers may hire employees to work less than full-time, in order to avoid the costs of providing benefits.

On the positive side, positions in the tourism industry do provide important advantages for some employees, including a career ladder for advancement opportunities. However, such advancement often requires relocation outside a given rural area. These positions may not be desirable for a lengthy career, but they can, in some cases where employees work full time, earn at or above regional average income levels. Wages can be quite meaningful for some employees, such as those in high school age groups and those seeking supplemental income.

Regardless of the true economic impacts, if community members do not perceive recreation as being important to the local economy, or if they do not feel that they want to promote this industry, they are not likely to encourage it. To gauge perceptions in the community, Wayne National Forest stakeholders were asked whether they feel that recreation has an economic impact on the area.

Results indicated that stakeholders overwhelmingly see recreation as having a major role in supporting tourism development. Most stakeholders indicated that recreation was very important to the area; however, not all of them were able to provide concrete examples of the types of roles it plays. The general attitude toward recreation in the economic development of an area is that it brings in money to the area, by attracting

[61] Cordell, H. Ken et al. 1999. "Outdoor Recreation in American Life: A National Assessment of Demand and Supply." Sagamore Publishing. Urbana, IL.

tourists. Another important economic benefit cited by stakeholders was that recreational opportunities in an area might encourage industry to locate in that area because employees could benefit from the proximity to recreational activities. Finally, stakeholders also mentioned that recreation can provide jobs to the communities, but it was often noted that recreation jobs typically are low-paying.

Creating an economy in Southeast Ohio that is dominated by recreation related to the Wayne National Forest faces a number of obstacles. The first obstacle may be the most problematic: the sustainability of a recreation-based economy. Because recreation is based on discretionary spending, an area that relies heavily upon outside visitors for its revenue stream would be highly susceptible to economic downturns that impinge discretionary spending, such as recession, stock market fluctuations or high costs of travel. The Strategic Research Group cites a report titled "Tourism and Forest Products: Twin Resource Sectors for Effective Community Development in the Lake States" that indicates that tourism should not exceed 35-50% of a community's economic base, so that stability can be maintained.[62]

A second problem for communities adjacent to the Wayne would be the seasonal nature of a recreation-based economy. Winter weather in Southeast Ohio cannot predictably support the most popular winter outdoor sports: skiing, snowboarding, snowshoeing, snowmobiling, etc. In fact, the erosion of soils common to Southeast Ohio requires the National Forest to close trails to all but foot traffic during the winter season. Reliance upon a service sector industry that essentially closes for four months out of each year would force area residents to adopt coping strategies such as commuting to large metropolitan areas for winter work. While many people from Hocking, Athens and even Meigs County already make the daily commute to the Columbus areas for employment, this arrangement does not support a robust economic base for the communities in "bedroom" counties.

A third obstacle to recreation-based economies is the natural limit to recreation development opportunities on the National Forest given its existing land base. Outdoor recreation typically requires a large amount of land area because two of the conditions

[62] Strategic Research Group, "Recreation Feasibility Study for the Wayne National Forest: Executive Summary. Columbus, Ohio September 2003.

that people seek are the experience of nature and the sense of solitude. Given the highly segmented nature of the Wayne's land ownership pattern, there are a limited number of appropriate areas remaining on the National Forest with sufficient space to support large recreation areas, such as new trail systems.

A fourth obstacle is service-sector nature of recreation employment. As the Recreation Feasibility Study report noted, approximately 39 percent of recreation-related jobs were associated with food and beverage purchases, and the remainder was equally distributed across retail, trade and recreation services.[63] Many of these jobs, while attractive to younger people, may not be highly desired by an older population. In 2020, it is predicted that the region will have a median age of 39.76 years, which will be somewhat higher than the state's median age of 38.01 years.

Finally, increased recreation development may conflict with the public's expressed desired condition for the National Forest. For example, several public comments received after the publication of the Notice of Intent expressed the view that off-road vehicles should be prohibited from the National Forest. However, ORVs represented nearly 98 percent of the trail permits purchased in 2002. In addition to the obvious reduction in trail use and trail permit sales, the local economy in the region surrounding the National Forest would also experience a decline in sport-related spending, as motorized sports are more costly in both initial investment and ongoing maintenance than such non-motorized activities as mountain bike riding or hiking.

The Forest also received comments in opposition to any further recreation development. One comment stated:

> *No trail cutting: Similarly, there is no need for trails to be continually cut into the forest. Trails are not naturally occurring feature in a forest. The people of this area tend to forget that this area used be all forest. The interstates, roadways, our very neighborhoods are enough trails as it is. No new construction (other than for rehabilitation of area). As noted above, the construction of new facilities is unnecessary. It carries with it the same costs and problems associated with forest roads. There should*

[63] Strategic Research Group. 2003. p. 32.

> *not be any National Forest financial resources going to the construction of more facilities, more trails, bridges, buildings, out houses, camp grounds, museums, walk ways or anything else. These only detract from the natural beauty of the forest for wilderness recreation and add nothing. Such facilities take away habitat and increase maintenance costs. Conclusion: The important focus of a revised forest plan is self-evident. It is the Wayne National Forest. It is not the Wayne National Tree Farm; not the Wayne National Energy Resource Reserve; not the Wayne National ORV Facility; and not the Wayne National Hunting Grounds. It is a forest and should be left to be as a forest will be. (Comment 381)*

If such sentiment is widely held by constituents outside the Forest Region, consensus in support of expanded recreation that furthers rural development of the 12 counties may be difficult to achieve.

Section 5: Conclusion

The Wayne National Forest is in a position perhaps unique in the National Forest System. After approximately 65 years of land acquisitions, the Wayne owns only about 28 percent of the land within the Forest Proclamation Boundary. The federal land ownership is currently highly fractured, with limited areas that are contiguous ownership. This dispersed ownership pattern presents a number of management problems for the Forest Service, not the least of which is the high demand for special use permits by private owners seeking access and utility service to private land interspersed with public lands. Comprehensive ecosystem management on a large scale is made more difficult by the existing ownership pattern. Remediating the problem of acid mine drainage on the National Forest, for example, is complicated by acid mine drainage sources on private lands. Consolidating federal ownership within the Proclamation Boundary was one of the goals identified in the 1988 Forest Land and Resource Management Plan.

A number of factors have prevented the Forest Service from achieving the objectives stated in the original Forest Plan. One of the primary factors was a change in

public attitudes toward the land acquisition program. Public support is essential for a successful federal land acquisition program; first, because continued Congressional appropriations are incumbent upon supportive public sentiment and second, because willing sellers are more willing in a climate receptive to federal acquisitions. Counties and communities adjacent to the National Forest perceived federal ownership as a trade-off of loss of property tax revenue in exchange for other revenue derived from National Forest activities.

Beginning in the 1980s, there was a growing public perception that the loss of property taxes was not being offset by other activities on the Wayne. As timber revenues declined, the amount of revenue-sharing available to schools within the Wayne also declined. With the Sierra Club lawsuit and subsequent discovery of the endangered Indiana bat on the National Forest, timber sales on the National Forest were suspended.

For local communities, the decline in timber harvest was a double-edged sword; local timber companies saw a decline in productivity and local school systems saw a decline in revenue-sharing from timber production. Local frustration with the situation led to calls for an end to federal land acquisitions in the affected counties. This sentiment led to a five-year moratorium on federal acquisitions in five Ohio counties that was incorporated in subsequent Congressional appropriations bills. When the moratorium was not reintroduced in Congress, a bill was introduced in the Ohio Legislature to revoke or modify the state's consent for federal land acquisitions in all 12 counties within the Wayne.

Although the real impact of federal ownership on local school funding is demonstrably minimal, the perception of the impact of federal ownership is distinctly negative in local communities. All economic analysis aside, circumstances have created a political situation that is hostile to continued expansion of the Wayne National Forest. One responder to the Notice of Intent public comment period provided a particularly astute observation of the political reality of the situation that seems appropriate to quote here:

> *All users and interest groups must realize that we need support from local communities around the forest, as well as state and federal*

legislators, if we desire additional land acquisition for the Wayne National Forest.

When local economic benefits are realized through management and use of the renewable forest resource, we will gain that support, provide more habitat, and recreation for all users of the forest.

The recent introduction of House Bill 441, which would have banned all further land acquisition for the Wayne, was introduced to maintain the local economies supported by timber products.

The continued use of court injunctions, or long-term plans, which prohibit wise use of sound timber management practices on the Wayne National Forest, will further solidify the opposition to any increase in the size of our national forest.

Do you care about others who make a living next to the forest? Are you willing to accept sound timber management harvesting practices that create diversity if it is the only way to gain support for more land acquisition? We must compromise to build the support, or there will never be another acre added to the Wayne. (Comment 545)

In addition to land acquisition challenges, the Wayne National Forest continues to face challenges associated with enhancing forest ecosystem protection and fostering a productive local economy in the face of multiple, competing interests with often conflicting views about appropriate forest management. Natural resources industries jobs are likely to comprise only a small proportion of all jobs, and populations will continue to grow and shift geographically as well as demographically (age, racial/ethnic diversity, income). Opportunities for further development of a tourism-based economy will arise as the population ages and more people participation in outdoor recreation activities, though over-reliance on tourism has been linked to economic turbulence as tourism rates fluctuate. In any case, it will be critical for the Wayne National Forest to work cooperatively with a variety of stakeholders as it plans for the future. The Forest's Land and Resource Management Planning process provides an important opportunity to do so.

Appendix: Ohio's School Funding Formula

The state's school funding formula starts from the school district's assessed valuation.[64] This is a critical point to understand the impact of the Wayne National Forest on funding for school districts within its Proclamation Boundary. Generally speaking, the lower the district's assessed valuation, the higher the percentage of state support. Conversely, the higher the district's assessed valuation, the lower the state support. Because assessed valuation does not include exempt property, the state's calculation treats school districts with National Forest lands as if those lands do not exist and sets the support level as if the school district was geographically smaller.

The Ohio Department of Education applies the school funding calculation independently to each school district. The results are reported on the SF-3, which is available at the Ohio Department of Education's website (www.ode.state.oh.us/school_finance/data/2002/foundation/SF3-report-FY2002.asp).

Some commenters expressed the belief that school districts receive a fixed level of funding for each student from the state. This description of the school funding formula is somewhat simplified. The formula actually ensures that the school district receives the amount of the Foundation Payment ($4,814 in 2002) for each student either from local taxes or from state support. In its simplest form, the school funding equation multiplies the number of students by the Foundation Payment, and then deducts the expected local contribution (Adjusted Recognized Valuation x .023) to determine the state's contribution. In 2002, the state's contribution to Frontier Local School District was $3,791 per student. For each student, the local tax base in the Frontier Local School District must also contribute $1,023.

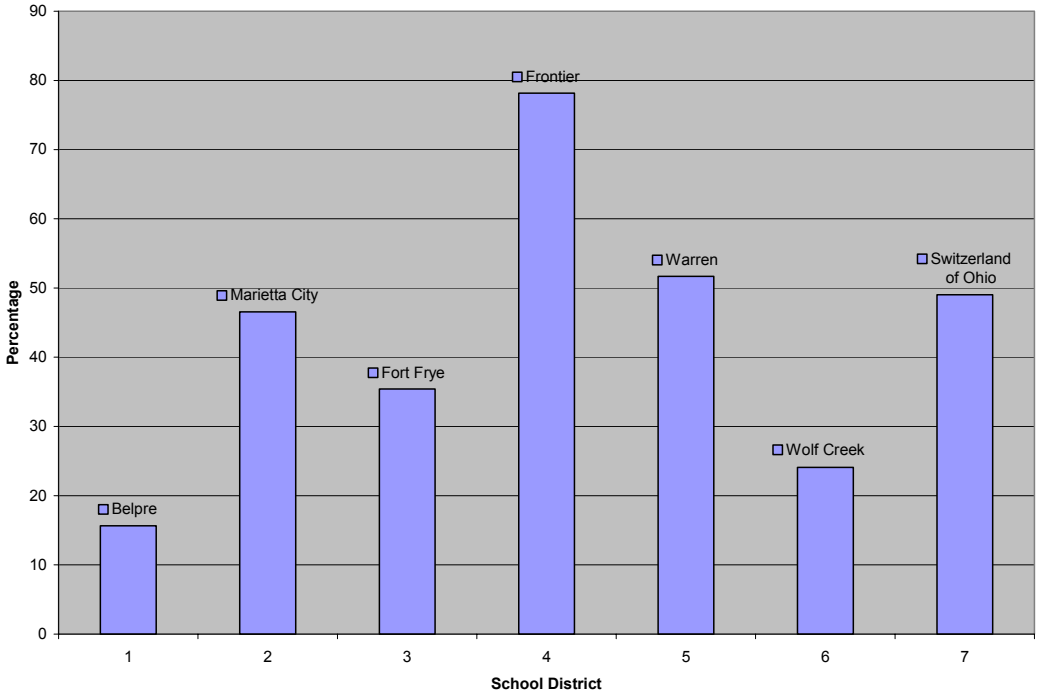
This local contribution is based on the assumption in the school funding formula that school districts have a minimum tax rate of 23 mils. This is a potential problem for school districts in rural areas, such as those surrounding the Wayne National Forest, where large amounts of real estate may be enrolled in tax abatement programs such as

[64] Sobul, Mike, Property Taxation and School Funding: Ohio Department of Taxation; Tax Analysis Division, May 2000.

CAUV or Forest Tax Law. In the 12 Ohio counties with National Forest lands, CAUV enrollment accounts for 19 percent to 49 percent of a given county's total acreage.

Figure A1 shows the percentages of school funding received from state sources for the school districts in Monroe and Washington counties. Because Ohio's school funding formula is based on assessed valuation, several factors affect the state's share besides the amount of tax-exempt land, including such factors as the average assessed valuation for homes and properties in the district.

Figure A1 The State's Contribution to School Funding in Washington and Monroe Counties



The difference between the anticipated local funding based on 23 mils and the actual local property tax revenue is called "phantom revenue." In short, the school district may not receive the same amount from property taxes that the school funding calculation assumes that it will be based on the assessed valuation. James Shirley, an expert in Ohio school funding issues and witness for the plaintiffs in the *DeRolph* lawsuit, explained "phantom revenue" in an editorial in the Athens News[65]

"In its simplest form, [phantom revenue] occurs when property values rise. When a typical home appreciates by $1,000 in valuation, the immediate effect on the average school district is that it gains about $5 in local revenue and loses $23 in state funding. The [Ohio Supreme] court is concerned that in their purported funding remedy, legislators may have created even more forms of phantom revenue."

One of the causes of "phantom revenue" is tax reduction factors. The state's formula assumes that assessed property is taxed at 23 mills; however, tax reduction may reduce the actual revenue below 23 mills, creating a shortfall. In addition, Shirley notes that recent changes to the Ohio tax code, primarily benefiting the business community, could cost Ohio schools an estimated $61 million in 2002.

To determine the net effect of National Forest lands, the following discussion will consider the impact of adding the value of the tax-exempt National Forest lands back into the assessed valuation of Frontier Local School District. Because it is impossible to predict the type of development that might have occurred on those lands, the baseline assumption is that the land would be transferred into private hands and not developed. In Table A1, the first equation represents the current situation, with the school district receiving 78.16 percent of its funding from the state.

[65] Shirey, James, "School Funding Expert: Be Prepared for Protracted Litigation," Athens News, Athens, Ohio, May 15, 2000. www.athensnews.com/archives/article.php3?story_id=2594

Table A1 -- Three possible calculations for school funding for Frontier Local School District: Current Situation, FS lands in private hands, FS lands in CAUV

All figures are estimates.

Scenario 1: Ohio Department of Education SF-3 under Current Situation	
3A. Formula ADM K*.5+(1-12)Total-(.75 Line 1G JVSD)+(.25 CVOC-RES)	926.39
3B. 3-Year Average Formula ADM	932.80
4A. Assessed Valuation	42,955,410.00
4B. Recognized Valuation	42,955,410.00
4C. Adjusted Recognized Valuation	42,955,410.00
5A. 4814 * 1.0075 * Greater of Line 3A or 3B	4,524,177.94
5B. Adjusted Recognized Valuation * .023	987,974.43
6. Total Formula Aid 5A minus 5B	3,536,203.51
7. State Share percent (Line 6 / Line 5A)	78.16
8. Special Education Weighted Amount	270,445.29
9. Career-Tech/Adult Ed. Cat1 FTE: 35.49 Cat2 FTE: 10.18	95,432.15
Scenario 2: SF-3 if FS lands added to assessed valuation as undeveloped	
3A. Formula ADM K*.5+(1-12)Total-(.75 Line 1G JVSD)+(.25 CVOC-RES)	926.39
3B. 3-Year Average Formula ADM	932.80
4A. Assessed Valuation	42,955,410.00
4B. Recognized Valuation	42,955,410.00
Add undeveloped FS lands	5,316,716.00
4C. Adjusted Recognized Valuation	48,272,126
5A. 4814 * 1.0075 * Greater of Line 3A or 3B	4,524,177.94
5B. Adjusted Recognized Valuation * .023	1,110,258.89
6. Total Formula Aid 5A minus 5B	3,413,819.05
7. State Share percent (Line 6 / Line 5A)	75.45
8. Special Education Weighted Amount	270,445.29
9. Career-Tech/Adult Ed. Cat1 FTE: 35.49 Cat2 FTE: 10.18	95,432.15
Scenario 3: SF-3 if FS lands added to assessed valuation as CAUV	
3A. Formula ADM K*.5+(1-12) Total-(.75 Line 1G JVSD)+(.25 CVOC-RES)	926.39
3B. 3-Year Average Formula ADM	932.80
4A. Assessed Valuation	42,955,410.00
4B. Recognized Valuation	42,955,410.00
Add undeveloped FS lands as CAUV	2,402,279
4C. Adjusted Recognized Valuation	45,357,689
5A. 4814 * 1.0075 * Greater of Line 3A or 3B	4,524,177.94
5B. Adjusted Recognized Valuation * .023	1,043,226.85
6. Total Formula Aid 5A minus 5B	3,480,951.09
7. State Share percent (Line 6 / Line 5A)	76.94
8. Special Education Weighted Amount	270,445.29
9. Career-Tech/Adult Ed. Cat1 FTE: 35.49 Cat2 FTE: 10.18	95,432.15

In the second scenario, the land is in private ownership, undeveloped and not enrolled in CAUV. Adding 38,591 undeveloped acres (entitlement acres) to the school district would increase the assessed valuation by approximately $5,316,716. If that amount is added to the assessed valuation in the SF-3 for the Frontier Local School District, the state's level of support could be reduced from 78 percent to 75 percent. Currently, Frontier Local receives a total of $4,522,376 in state school funding. At the lower percentage, the district might receive approximately $4,365,574, a reduction of $156,801 in state school funding. In addition, the county would not receive the combined federal payments, which would have been a loss of $72,923 in 2001. The combined loss might be $229,724. However, the school district would receive additional property tax dollars. Based on the amount of $3.59 per acre paid for a 10-acre tract in Grandview Township, the 38,591 undeveloped acres might generate approximately $138,541.69. Therefore, between the reduction in state school funding and the loss of federal payments, the county and school district could see a net shortfall of about $91,183.

The third scenario presented assumes the 38,591 undeveloped acres are enrolled in CAUV, in which case the assessed valuation might be increased by approximately $2,402,279. That increase might reduce the state funding percentage to 76.94 percent, a potential loss of $70,589. With the additional loss of $72,923 in federal payments, the combined loss of state and federal dollars could be $143,513. Based on the CAUV rate paid by the property in Grandview Township, those lands could generate $42,836.01, possibly creating a shortfall of $100,677 compared to the current state funding and federal payments.

This can be observed on an anecdotal basis as well. A student in Frontier Local requires approximately $1,010 of local tax revenue each year. If a household with a child pays less than that amount in property taxes, the school district suffers a net loss. An opponent of National Forest expansion documented this situation. The anonymous citizen developed a flyer that discussed tax revenue generated by home construction on land in Monroe County previously optioned but not purchased by the Forest Service.[66] The document cites the taxes generated by six homes. A $200,000 dollar home generates

[66] Anonymous. Nice-to-Know Additional Information. Photocopy available.

$1,645.42 per year in property taxes. However, the local contribution per student in the Switzerland of Ohio Local School District for 1997-98 was $1,756.[67] Similarly, the tax total of six homes on the site is reported as $4,960.70. If only three children of school age live in those six homes, then the development has created a deficit in the county tax base of $307.30, not including any additional costs for public services such as road maintenance, sewer, water, fire departments, police, etc.

[67] Ohio Department of Education. Tax Valuation and Current Revenue Receipts by Source. http://ode000.ode.state.oh.us.www.ims.costpp/table3_98.txt